



W. Richardson & Co.

Horticultural Builders,

AND

Heating Engineers

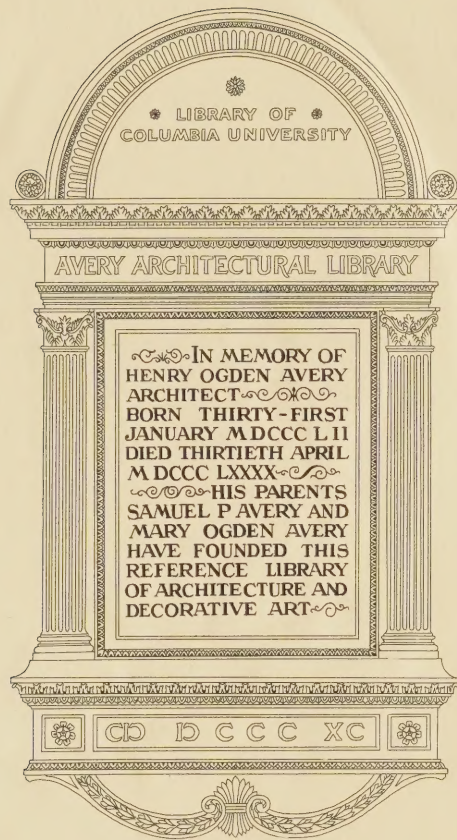
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DARLINGTON.

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W. RICHARDSON & CO.,  
Horticultural Builders and Heating Engineers,  
NORTH OF ENGLAND HORTICULTURAL WORKS,  
DARLINGTON.

# W. RICHARDSON & CO.,

## Horticultural Builders & Heating Engineers,

NORTH OF ENGLAND HORTICULTURAL WORKS,

# Darlington.

In issuing the following catalogue of **Horticultural Buildings**, we may explain that the various illustrations show a selection only of the most usual forms of the structures which we are constantly erecting. The sizes of the various Buildings can be made larger or smaller, and the designs can be altered in any way to suit the special features of the position for which they may be required. We have **many hundreds of Plans** of Conservatories, Greenhouses, Orchid Houses, Vineries, Peach Houses, Cucumber Houses, Plant Stoves, &c., &c., which we have erected, and we almost invariably make a special plan with "elevations" and "sections" to a scale of  $\frac{1}{4}$ -inch to the foot, and submit the same with a complete estimate of the cost, for approval, before putting an order in hand.

Our works have been erected entirely with a view to the manufacture of Horticultural Buildings and similar structures at **the lowest possible cost**, consistent with thoroughly sound and satisfactory work; we have a great variety of steam power machines of the best make, and we have a large staff of workmen thoroughly trained and highly skilled in this business.

We have also a **railway siding** from the main line of the North Eastern Railway into our yard, thus effecting a great saving in cartage and labour in receiving the raw materials and in sending out the finished work.

### PERSONAL INTERVIEW.

A personal interview is often desirable before making a design for the building or buildings or for Heating Apparatus, &c., proposed to be carried out, and as a member of the firm or one of our representatives is frequently travelling in various parts of the kingdom, such an interview is easily arranged, when we can advise and take all dimensions, thus saving our clients any unnecessary trouble, and, at the same time, giving them the advantage of our experience, which has extended over a period of more than 30 years.

### TIME.

We are always obliged to our clients when they allow us as much time as possible for estimates, &c., as we are often hard pressed with other plans and estimates previously promised; but when a plan is approved and the order given, we are usually in a position to execute the work very rapidly.

### BRICKLAYERS' WORK, &c.

We do not undertake Bricklayers' Work or Masonry, as this can always be done at less cost by local tradesmen, but we provide plans for their guidance, not only drawn to  $\frac{1}{4}$ -inch scale, but with all the sizes clearly figured on them, and we are also happy to give full information on the subject, so that any mistake or difficulty is almost impossible.



### ARCHITECTS' DESIGNS

Are carried out by us with the greatest care, our usual practice being to make our own  $\frac{1}{4}$ -inch scale working plans with all details that are necessary, and submit the same as well as a complete specification with our estimate, for approval.

We shall be happy to give the names of a great number of the leading Architects throughout the Kingdom under whose supervision we have carried out important contracts invariably with satisfaction to them.

### QUALITY OF TIMBER.

Special attention is paid by us to the quality, suitability, and the seasoning of the timber used—all sappy or otherwise defective wood is thrown out, and the timber is dried in large sheds (specially constructed for the purpose) for a long time before being used.

### CONSTRUCTION.

Our Buildings are made as light as practicable consistent with strength; iron trusses and tie rods and many special improved fittings being used for strengthening the framework.

When thought desirable, more massive framework is used for Conservatories to be in harmony with certain classes of Architecture. Great care is always taken to have mouldings of good design, and to finish everything properly to the smallest detail.

### "TENANTS' FIXTURES" AND EXPORTATION WORK.

When required for "Tenants' Fixtures" or for Exportation, our buildings are constructed in a special **Portable** form; they are fitted up at our works (being put together with galvanized screw bolts), and each part is carefully numbered before being sent away.

### VENTILATOR GEARING.

Iron gearing of the most improved construction is made for opening all the ventilators simultaneously when required, special attention having been paid to this department for many years.

### GLASS AND PAINT.

All glass is selected with the greatest care, so as to be free from "burning spots," and in every way suitable for its purpose.

Only the very best genuine white lead paint is used, mixed with the best linseed oil, and tinted to suit the taste of our clients.

### SPECIAL SYSTEM OF GLAZING.

A great number of inventions for glazing without putty have been patented within the last few years. We have carefully examined these, but we have not found one of them that is really satisfactory, and most of them have defects which are much more serious than those of the old-fashioned putty glazing.

Whatever kind of elastic material is used for the glass to rest on decays within a year or two and renders the glazing a complete failure; but without such elastic material, the crevices left allow the retention of water, which, when it freezes, breaks the glass; they also harbour insects; fumigating is almost impossible; and there is a serious escape of heat, thus requiring a larger expenditure in fuel.

One important professed object of all these systems is to enable the gardener or any unskilled labourer to put in new squares, but from our experience, this is a fallacy, more glass being broken and more time expended in repairing such roofs than when glazed in the usual way.

In addition to these objections the cost of all the patented contrivances is greater than the ordinary system of construction.

We, therefore, still use putty for glazing, but we have for many years made an **improved form of glazing bar**, which entirely prevents the possibility of its cracking or peeling off (although this would never occur if the work was properly done). By the use of our machinery, we are enabled to carry out this improved system of glazing without any extra cost whatever, and it has proved a **complete success**.

For Forcing and Orchid Houses, &c., having a high temperature and considerable moisture, we have made a still **further improvement** by forming a **channel** at each side of all the bars and rafters, which conveys the condensed moisture into the outside gutters.

This arrangement is highly approved by the gardening fraternity as it is found to **prevent all drip upon the plants.**

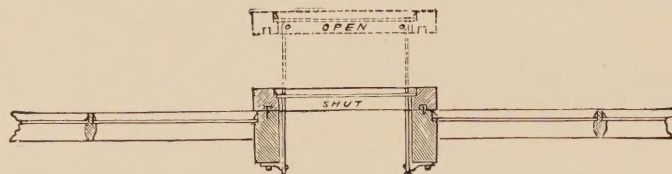
## Richardson's Patent Horticultural Buildings.

Our **Patent Horticultural Buildings** are much superior to the ordinary kind for many purposes, their special advantages being described below.

These Buildings are represented by the following Figs., viz. :—18, 24, 25, 32, 39, 40, 42, and 49.

The patent system by which they are ventilated consists of 9-inch openings in the roof, the full length of the lights from the top to the bottom (or in span roofed houses, the full length of one side of the roof and a portion only of the other side), at distances of 5 feet or thereabouts centre to centre.

Each 9-inch opening is covered with a glazed frame 13 inches wide, made perfectly weathertight, with grooves up the undersides fitting down on galvanized iron tongues projecting from the roof. These frames are simultaneously lifted clear of the whole roof by a parallel movement (see section below), leaving an open space at both sides to be regulated as may be desired, and thus allowing a free and even circulation of air throughout the house, at the same time protecting the interior effectually from rain, wind, or a direct down draught upon the plants.



Horizontal Section of Patent Ventilator.

When desired, these ventilating frames are made in 2 parts as in Fig. 42, in which case the whole of the ventilators (both the upper and lower ranges) may still be opened simultaneously, being connected together at will by a series of bolts, so that by the simple movement of a lever handle, they may be instantly disconnected, and the upper ventilators opened alone, the lower ones remaining closed. Any one of these ventilators can, if desired, be thrown out of gear, so as not to be opened with the rest.

**Bottom Ventilation** is obtained by wood "flaps" the full length of the sides, and about 8 inches wide (hung at the upper edges with brass hinges), these also opening and being regulated by a single lever handle to each set; the air is thus admitted underneath the plant stages and immediately over the hot water pipes, by which it is slightly tempered on entering the house.

The following are some of the **advantages** which these Patent Houses have been proved to possess over others:—

1st. The amount of Roof Ventilation is in proportion to the width as well as the length of the house, whereas, by the ordinary system this is not the case.

2nd. The quantity of air capable of being admitted is greater than by any other system; but no other is under such perfect control, nor so easily worked.

3rd. The Ventilators can be open during rain or wind; their position completely protects the interior of the house, and when closed, they are perfectly watertight.

4th. When this system is supplied to a Vinery, a free and even circulation of air is obtained between the foliage and the glass, under the whole area of the roof, which is proved to conduce greatly to the vigour of the vines.

5th. Grapes in late Vineries may, under this system of ventilation, be kept hanging longer than in any other way in consequence of the rapidity with which the moisture can be dried off at any time.



# SPECIFICATION

Referred to in Price Lists—see Pages 35 to 50.

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**TIMBER.**—The timber used is **Baltic Red Deal**, except for the sills, which are of **Pitch Pine**; all the timber is of the **best quality, very carefully selected, free from sap or other defects, and properly seasoned.**

**ENDS.**—Two complete framed ends are supplied with each House, but if only one is required, a proportionate allowance is made.

**DOORS.**—Houses 20 feet long and under have each one door, larger houses two doors, panelled and chamfered or moulded, and fitted with strong special quality brass mortice locks, with gun-metal keys and patent furniture.

**CONSTRUCTION.**—The strains on the various parts of every building are carefully considered, and iron or steel tie rods, trusses, cross bars, and fittings are used where necessary; the requisite strength of every structure being **guaranteed.**

The rafters and bars are neatly moulded, and the whole of the work is thoroughly well finished.

**GUTTERS.**—Cast iron gutters, neatly moulded, with internal sockets, are fixed to all the eaves.

**DOWN PIPES.**—Rain water down pipes of suitable size are fixed where necessary, extending below the surface of the ground, where the drains should be connected to them.

**TANKS.**—Rain water tanks or cisterns of galvanized iron, any size, and suitable pumps, are supplied when required, and the down pipes connected to the former; special quotations are given for these.

**VENTILATION.**—The various systems of top and bottom ventilation are shown in the illustrations.

Improved **Iron Gearing** for the simultaneous opening of each set of ventilators is included in the Price List of Richardson's Patent Horticultural Buildings, Figs. 18, 24, 25, 32, 39, 40, 42, and 49 (see page 6 for description), and also for the lifting ridge caps in Figs. 33, 34, 35, and 36. In other houses the lists include suitable regulating iron stay bars, or a cord and pulley arrangement to open each ventilator separately; but simultaneous gearing (by means of which the entire length of ventilator is opened at once and easily, being actuated by a neat lever handle or screw lifting machine) is **strongly recommended**, the extra cost of which, including fixing, is from 1/6 to 2/9 per running foot.

**GLAZING.**—The glazing is done on our **improved system**, as described in page 5, with a very superior special quality of sheet glass in large sizes, 21 oz. weight per foot to the roofs and doors, and 15 oz. per foot to the remainder. Patent rough plate glass is recommended for Ferneries, and in some cases for Conservatory roofs, the cost being usually the same as the 21 oz. sheet.

Our **improved channelled bars** for conveying condensed moisture from the roofs into the gutters (see page 6) are strongly recommended for **Orchid, Stove, and Forcing Houses, &c.**, and the extra cost is very slight.

**PAINTING.**—The whole of the work usually painted has 3 coats of the best genuine white lead paint of any colour which may be desired, 2 coats being given before, and 1 coat after being fixed. Another coat is recommended to be applied within 2 years.

**DELIVERY.**—All goods are delivered **Carriage Paid to any Railway Station in Great Britain.**

**FIXING.**—All Houses are properly **fixed by competent workmen, this and all expenses being included** in the Price Lists, except rail fares from and to the nearest other contract, these are usually trifling, and can at any time be quoted for.

**WALLS, &c.**—Bricklayers' and masons' work is not included (see page 4).

**RIDGE CRESTING, &c.**—Ornamental cast iron ridge cresting and iron finials are not included, but are kept in stock in various patterns of good design, and are fixed at a slight extra cost.

**SUNDRIES.**—Plant **staging** of improved construction in either wood or iron and slate, also **trellised footpaths**; and **Galvanized Training Wires, &c.**, are supplied and fixed to special estimates.

**HEATING.**—Hot water heating is not included in the Price Lists, but is undertaken (at very low rates of prices for first-class work), with the **best patent and other boilers** and **cast or wrought iron pipes**, with **improved elastic joints**, in any part of the kingdom, fixed by experienced workmen and **guaranteed.** Estimates free—see pages 61, 62, &c.

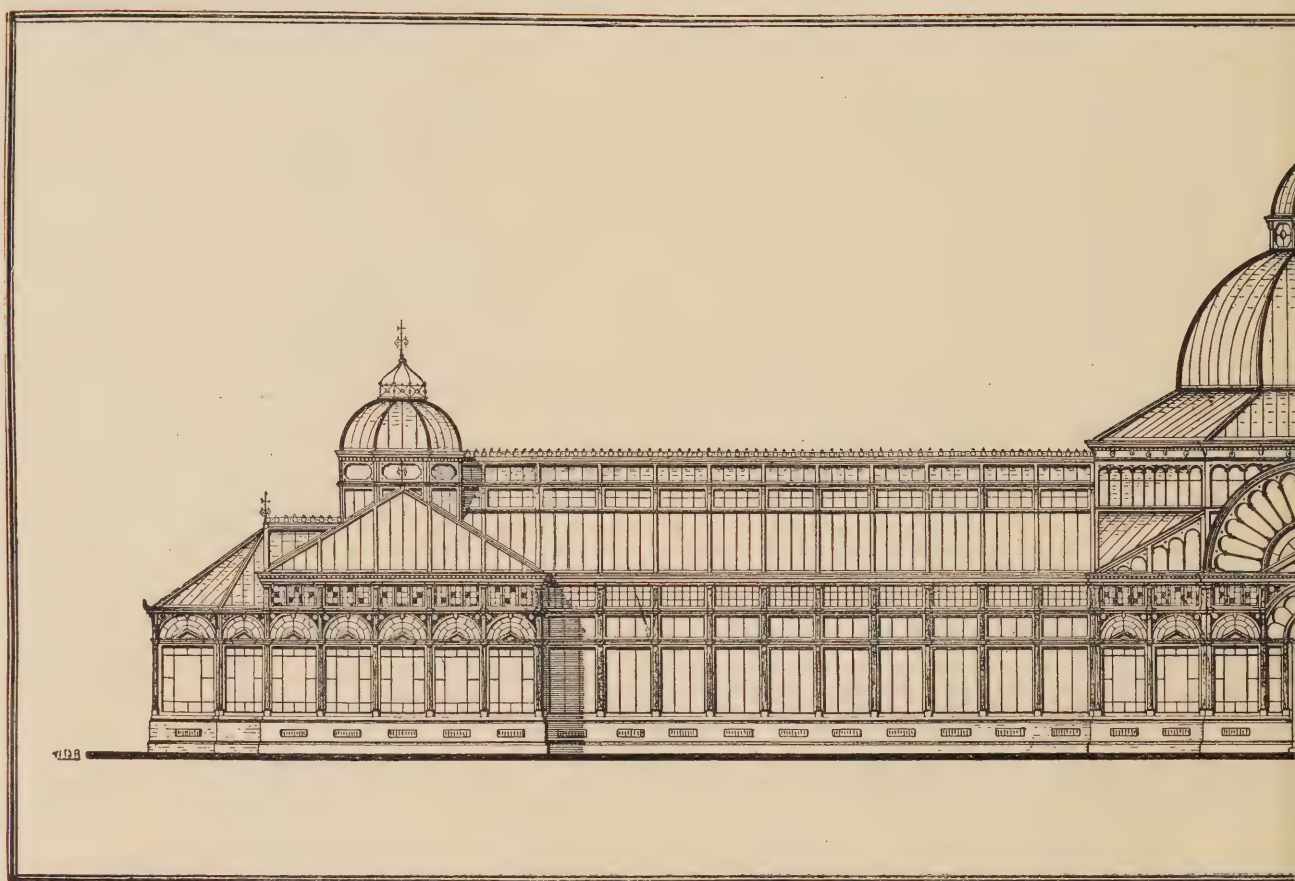
Names of a few, out of some thousands, of the nobility and gentry in every county in England and in Wales, Scotland, Ireland, the Isle of Man, the Channel Islands, various countries of Europe, and in America, &c., for whom we have executed orders.

- His Grace the Duke of Cleveland, Raby Castle, Yorks.  
 Her Grace the Duchess Dowager of Northumberland, Stanwick Park, Yorks.  
 His Grace the Duke of Abercorn, Berkhamstead.  
 The Most Honourable the Marquis of Londonderry, Wynyard Park, Co. Durham.  
 The Most Honourable the Marquis of Headfort, Headfort House, Kells, Ireland.  
 The Most Honourable the Marquis of Bute, Cardiff Castle.  
 The Most Honourable the Marquis Townshend, Balls Park, Hertford.  
 The Most Honourable the Marchioness Dowager of Londonderry, Machynallyeth.  
 The Most Honourable the Marchioness of Hertford, Ragley Hall, Warwick.  
 The Rt. Honourable the Earl of Zetland, Upleatham Hall, Yorks.  
 The Rt. Honourable the Earl of Caithness, Stagenhoe Park, Herts.  
 The Rt. Honourable the Earl of Erne, Crom Castle, Co. Fermanagh.  
 The Rt. Honourable the Earl of Listowel, Connamore, Co. Cork.  
 The Rt. Honourable the Earl of Rosse, Birr Castle, Queen's County.  
 The Rt. Honourable the Earl Howe, Gossall, Leicester.  
 The Rt. Honourable the Earl Dysart, Buckminster Park, Grantham.  
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 The Rt. Honourable Viscount Boyle, Brancepeth Castle, Durham.  
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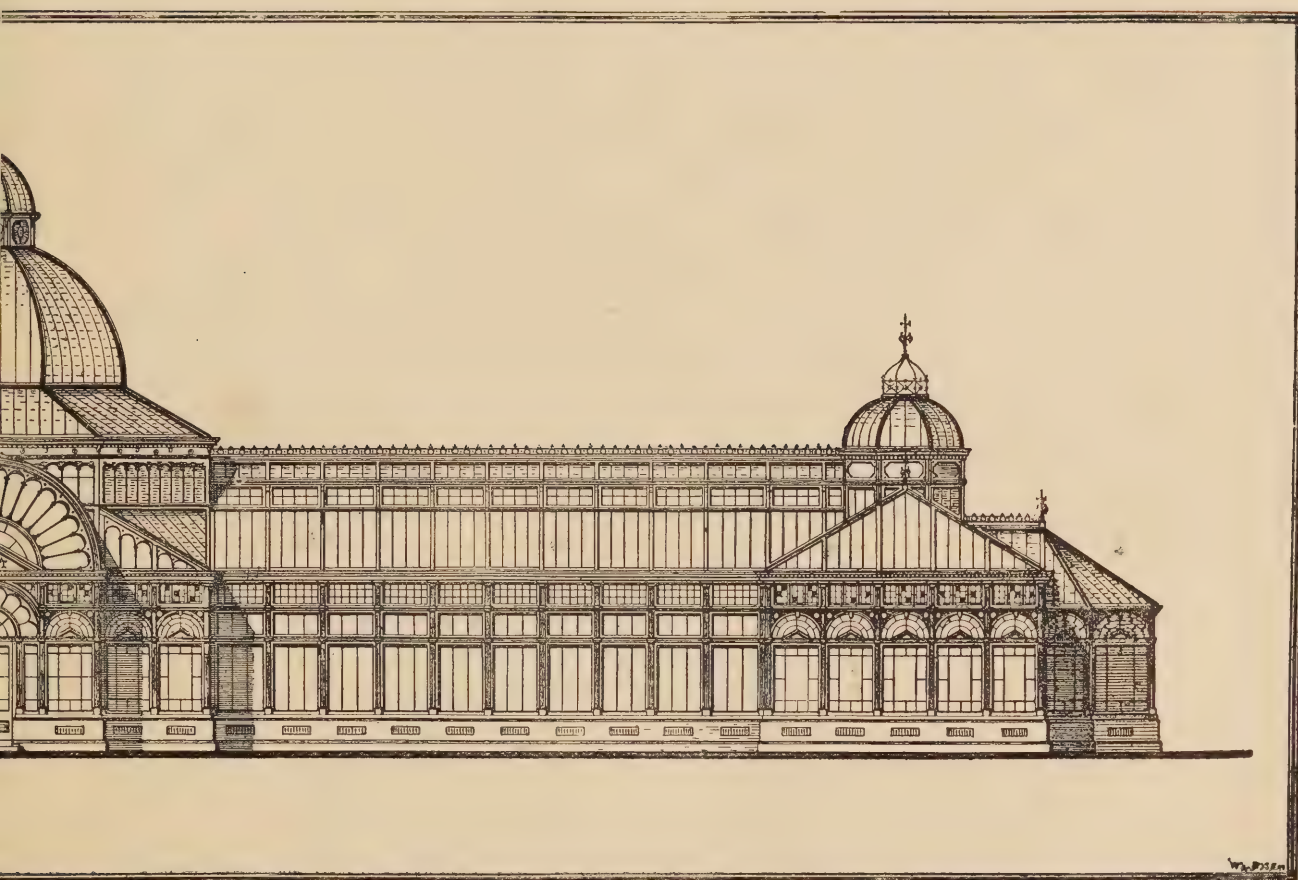
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 T. R. Jessop, Esq., Roundhay Park, Leeds.  
 Rev. Francis Bedwell, Carleon, Newport, Monmouthshire.  
 Geo. H. Dean, Esq., Whitehall, Sittingbourne, Kent.  
 Dr. Watney, Buckhold, Basildon, near Reading.  
 Rev. G. L. Greame, Sewerby House, Flamboro', Yorks.  
 H. Theodore Cookston, Esq., Sturford Mead, Warminster, Wilts.  
 John Francis, Esq., Wallog, Borth, R.S.O., Wales.  
 F. G. Lloyd, Esq., Oakwood, Bexley, Kent.  
 West Riding Asylum, Menston, near Leeds.  
 R. Daniels, Esq., Foley Lodge, Stockcross, near Newbury, Berks.  
 A. Robertson, Esq., Newtown Lodge, Waterford, Ireland.  
 Lieut.-Colonel Legard, The Cliff, Scarborough.  
 W. E. Bowers, Esq., Coverswall Castle, near Stoke-on-Trent.  
 Geo. Wailes, Esq., Nascot Wood, Watford, Herts.  
 W. R. Cookson, Esq., Binfield Park, near Bracknell, Berks.  
 Messrs. Jas. Backhouse & Son, The Nurseries, York.  
 Colonel Hargreaves, Whalley Abbey, Lancaster.  
 Cliff Bridge Co., Scarborough.  
 M. Stephenson, Esq., Rosset Holt, Harrogate.  
 John Marshall, Esq., Derwent Island, Keswick.  
 Stephen A. Marshall, Esq., Skelwith Fold, Ambleside.  
 W. Roylance Court, Esq., Middlewich, Cheshire.  
 S. Berry, Esq., Waverley Hall, Ashburton, Devon.  
 S. Hocker, Esq., Penhurst, Newton Abbot, Devon.  
 H. D. Cohen, Esq., Wykehurst, Somerset Road, Edgbaston, Birmingham.  
 Richard Wilson, Esq., Armley, near Leeds.  
 S. Chatwood, Esq., High Lawn, Worsley, near Bolton.  
 Mrs. Starkie, Ashton Hall, near Lancaster.  
 J. H. Cookson, Esq., The Hollies, Stanley, near Wakefield.  
 Captain Campbell Hyslop, Stretton House, Church Stretton, Salop.  
 C. Watson, Esq., Burton Grange, Far Headingley, Leeds.  
 Eugene Bunge, Esq., Baarm, Amsterdam.  
 A. A. Collyer Bristow, Esq., Beddington Place, near Croydon.  
 John Longdon, Esq., Glebelands, Aberavon, Port Talbot, South Wales.  
 Samuel Wilson, Esq., Rutland Lodge, Potternewton Lane, Leeds.  
 Major Bell, Thor, Birchington, Thanet.  
 T. W. Waller, Esq., The Chalet, Spa Grounds, Scarborough.  
 J. Warrington, Esq., Cragwood, Rawdon, near Leeds.  
 Hy. Jones, Esq., Plymouth Road, Penarth, Cardiff.  
 G. W. Alexander, Esq., Woodhatch, Reigate.  
 W. Jenkins, Esq., Conselt Hall, Co. Durham.  
 Geo. Burr, Esq., Woodville Road, Highfields, Keighley.  
 F. D. Pawle, Esq., Wraylands, Reigate.  
 John Blumer, Esq., Rockside, Roker, Sunderland.  
 A. Matthew, Esq., Bradden Villa, Torquay.  
 J. J. Swindell, Esq., Park Road Villas, North Finchley, London.  
 Hy. Lamb, Esq., Gretton, near Kettering.  
 J. Anderson, Esq., Basque, Merrow, near Guildford.  
 M. C. Brogden, Esq., Porthcawl, Bridgend, Glamorganshire.  
 C. Ford, Esq., "Observer" Office, Lancaster.  
 J. Bisson, Esq., La Croute, Vale, Guernsey.  
 H. Duport, Esq., Les Marais, Vale, Guernsey.  
 F. Du Pre, Esq., Oakwood, Chichester.  
 David Richardson, Esq., Wheel Birks, Stocksfield-on-Tyne.  
 S. Woodhouse, Esq., Norley Hall, Frodsham, Cheshire.  
 Captain Wilson Atkinson, Acton House, Felton, Northumberland.  
 Rev. Canon Burnett, Kelloe, Spennymoor.  
 J. E. Backhouse, Esq., Hurworth Grange, Darlington.  
 N. C. Cookson, Esq., Oakwood, Wylam-on-Tyne.  
 T. T. Hodgkin, Esq., Horsegate Lees, Scarborough.  
 Rev. Canon Bliss, Bettishanger, Sandwich.  
 E. Docker, Esq., Spring Grove, Isleworth.  
 Wm. Bindloss, Esq., Milnthorpe, Westmoreland.  
 Rev. G. R. Dupius, Sessay, Thirsk.  
 Captain Irvine, Ragworth Hall, Stockton.  
 J. Jackson, Esq., Guernsey.  
 M. Salaman, Esq., Mill Hill, London.  
 W. A. Burge, Esq., Potters Bar, Middlesex.  
 Miss Edwards, The Oaks, Boreham Wood, Herts.  
 Dr. Toner, St. Aloysius Presbytery, Hebburn-on-Tyne.  
 Rev. U. B. Miles, Askham-Richard, York.  
 T. Murgatroyd, Esq., Silverdale, Carnforth.  
 E. H. Carbutt, Esq., Nanhurst, Cranleigh, Surrey.  
 E. Cassel, Esq., Walworth Castle.  
 H. Cochrane, Esq., Eshwood Hall, Durham.  
 Rev. H. M. Erskine, Long Marton, Penrith.  
 A. Fawkes, Esq., Hawksworth Hall, Guisely.  
 Major Coulson, Jesmond Manor, Newcastle.  
 Rev. A. W. Headlam, Durham.  
 J. Akenhead, Esq., Gate Helmsley, York.  
 F. F. Bircham, Gwentland, Chestow.  
 R. Binnal, Esq., Lea Grove, Brace Meole, Shrewsbury.  
 J. A. K. Broadwood, Esq., Deerswood, Crawley.  
 Rev. G. D. Anderson, Thornton Watlass, Bedale.  
 Miss Cawston, Folly House, Braintree.  
 E. A. Haws, Esq., Elstree, Herts.  
 C. T. Hoare, Esq., Bignell Hall, Bicester, Oxford.  
 A. Le Tissier, Esq., Guernsey.  
 Rev. S. Bennett, Uphill Rectory, Weston-Super-Mare.  
 E. Yorke, Esq., Bewerley Hall, Pately Bridge.  
 S. Johnson, Esq., Glenhaven, Elstree, Herts.  
 C. F. Woodall, Esq., Colwyn, North Wales.  
 Rev. R. H. Howard, Wygfair, St. Asaph.  
 Captain Crawford, Hangerfield, Witely, Surrey.  
 A. Davies, Esq., Burton Salmon, Yorks.  
 Mrs. Vaughan Davies, Tan-y-bwlch, Aberystwith.  
 Rev. E. H. Fox, Durham.  
 W. E. Blackett, Esq., The Limes, Cotherstone.  
 Mr. C. E. Russell, Worthing.  
 Rev. J. N. Bromehead, Dringhouses, York.  
 W. Allan, Esq., Evenley Hall, Brackley.  
 A. J. Collas, Esq., Maison-de-Bas, Guernsey.  
 Thos. Narburgh, Esq., Elstree, Herts.  
 C. H. Waterlow, Esq., Datchet, Buckingham.  
 E. Winsor, Esq., Knutsford, Cheshire.



FRONT ELEVATION C

(Scale, 16ft. to an inch, but di





1.

## A WINTER GARDEN.

(Dimensions can be varied indefinitely)

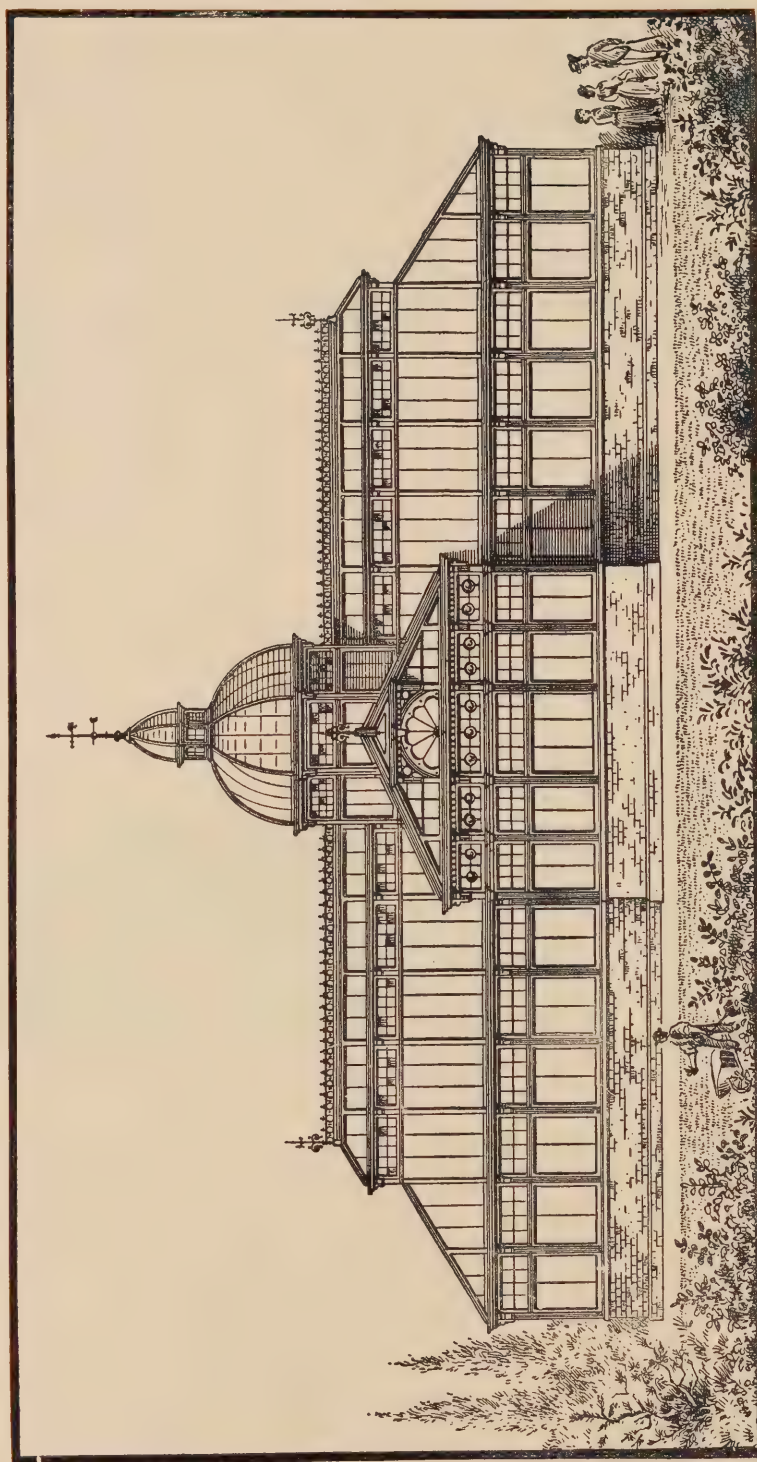


Fig. 2.

## FRONT ELEVATION OF CONSERVATORY OR WINTER GARDEN.

About 70ft. long by 30ft. wide.



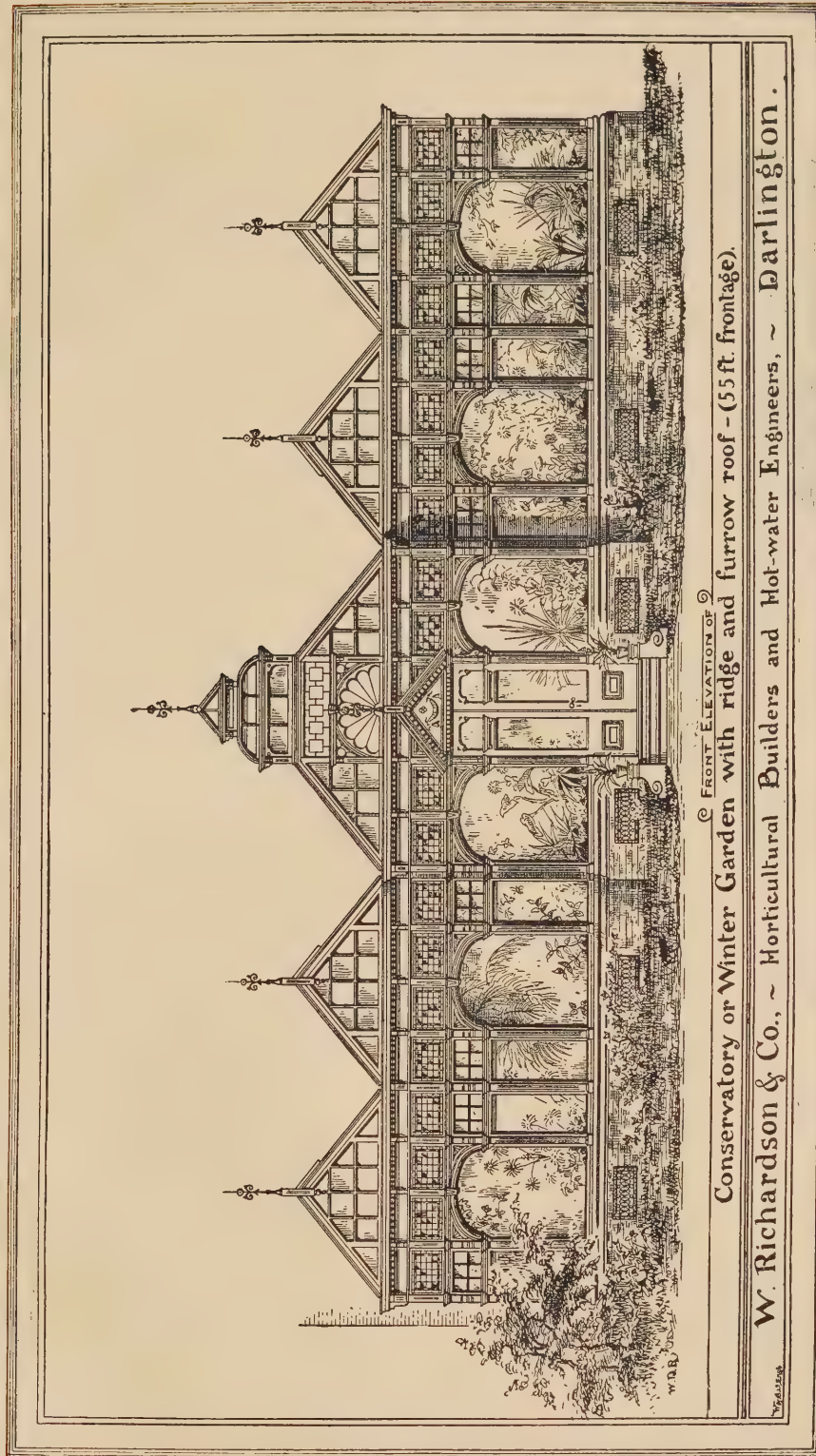


Fig. 3.

# FRONT ELEVATION OF CONSERVATORY OR WINTER GARDEN.

About 40 ft. long by 55 ft. wide

(Scale, 8 ft. to an inch, but dimensions can be altered as desired).

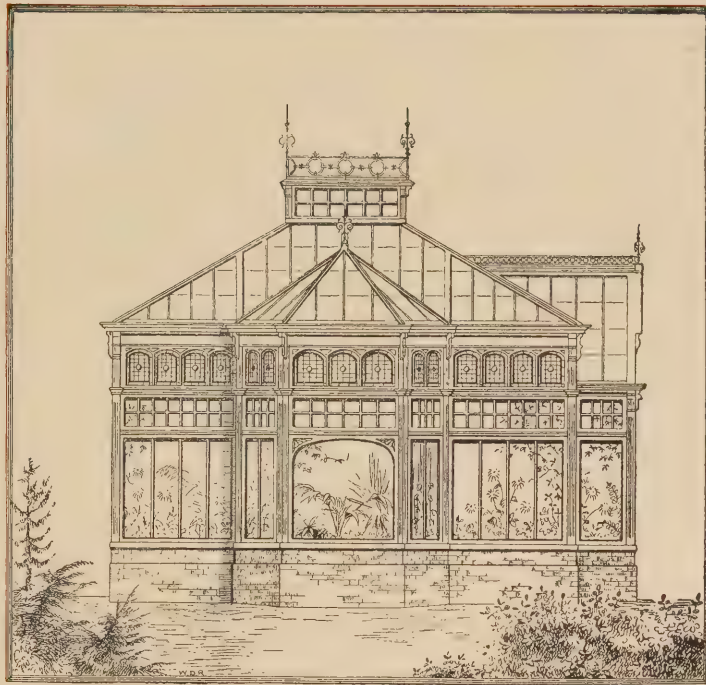


Fig. 4

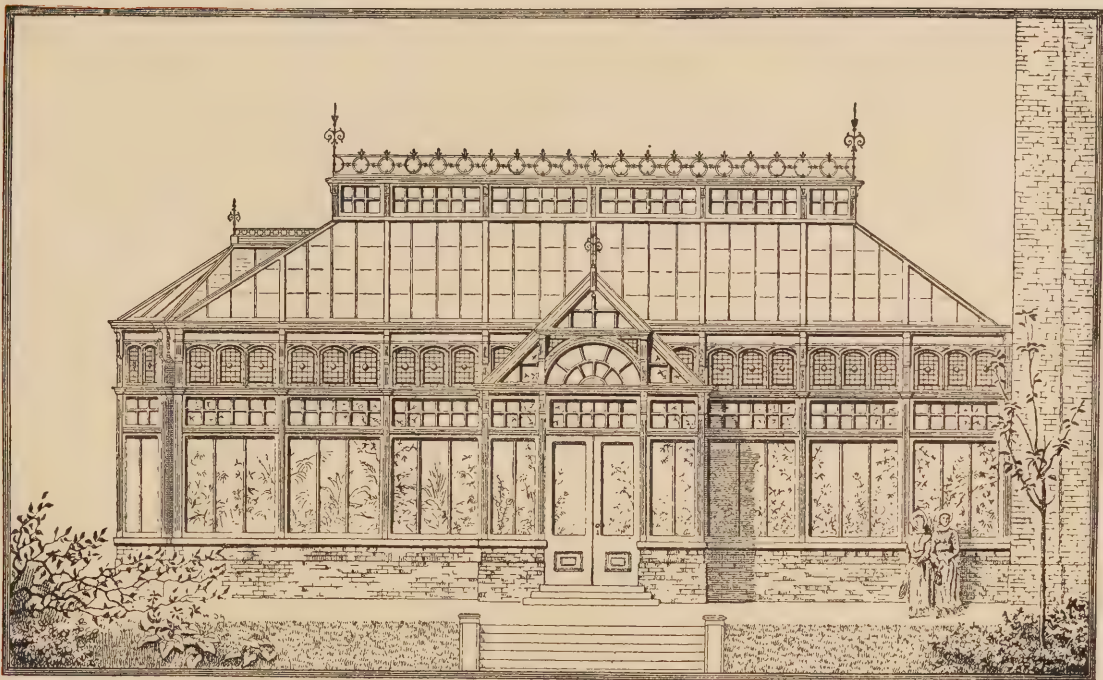
### CONSERVATORY OR WINTER GARDEN.

Erected for Major Ropner, Preston Hall, Nr. Stockton. Architect : J. Garry, Esq., West Hartlepool.





End Elevation.



Side Elevation.

Fig. 5.

### CONSERVATORY.

Erected for the Right Honourable the Earl of Listowel, Convamore, Co. Cork

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

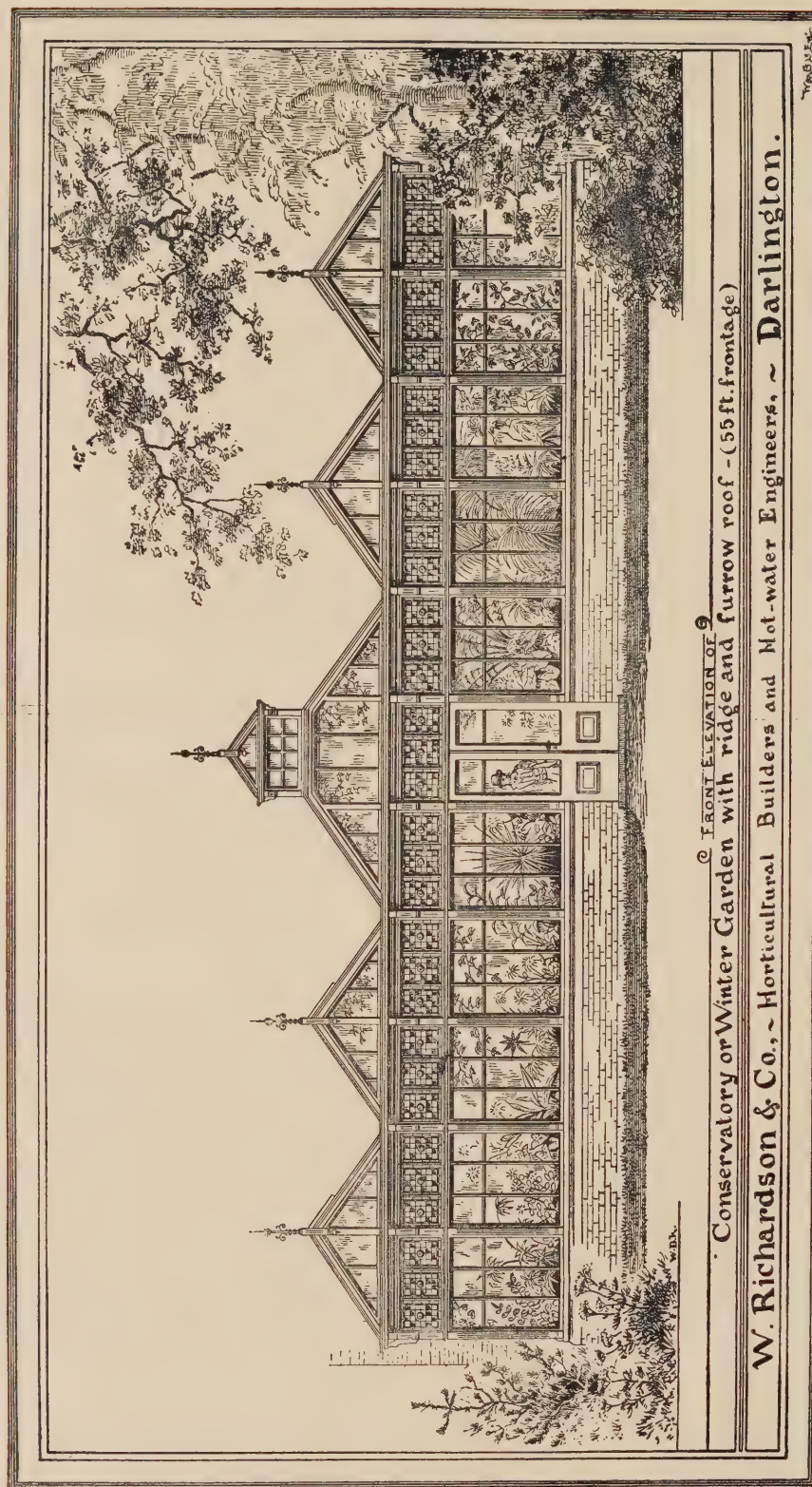


Fig. 6.

# FRONT ELEVATION OF CONSERVATORY OR WINTER GARDEN.

About 40 ft. long by 55 ft. wide.

(Scale 8 ft. to an inch, but dimensions can be altered as desired).



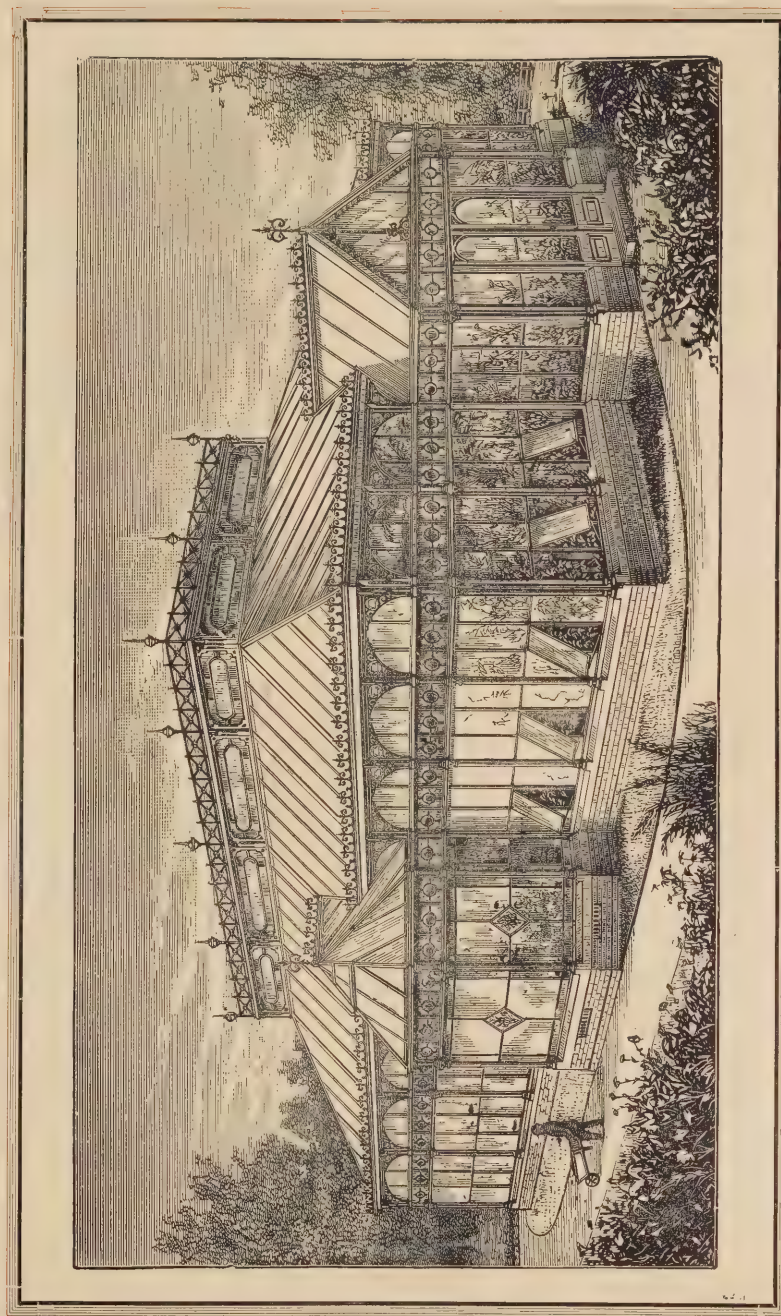


Fig. 7.

## CONSERVATORY OR WINTER GARDEN.

Erected for A. F. Puckridge, Esq., Forest House, Chigwell, Essex.

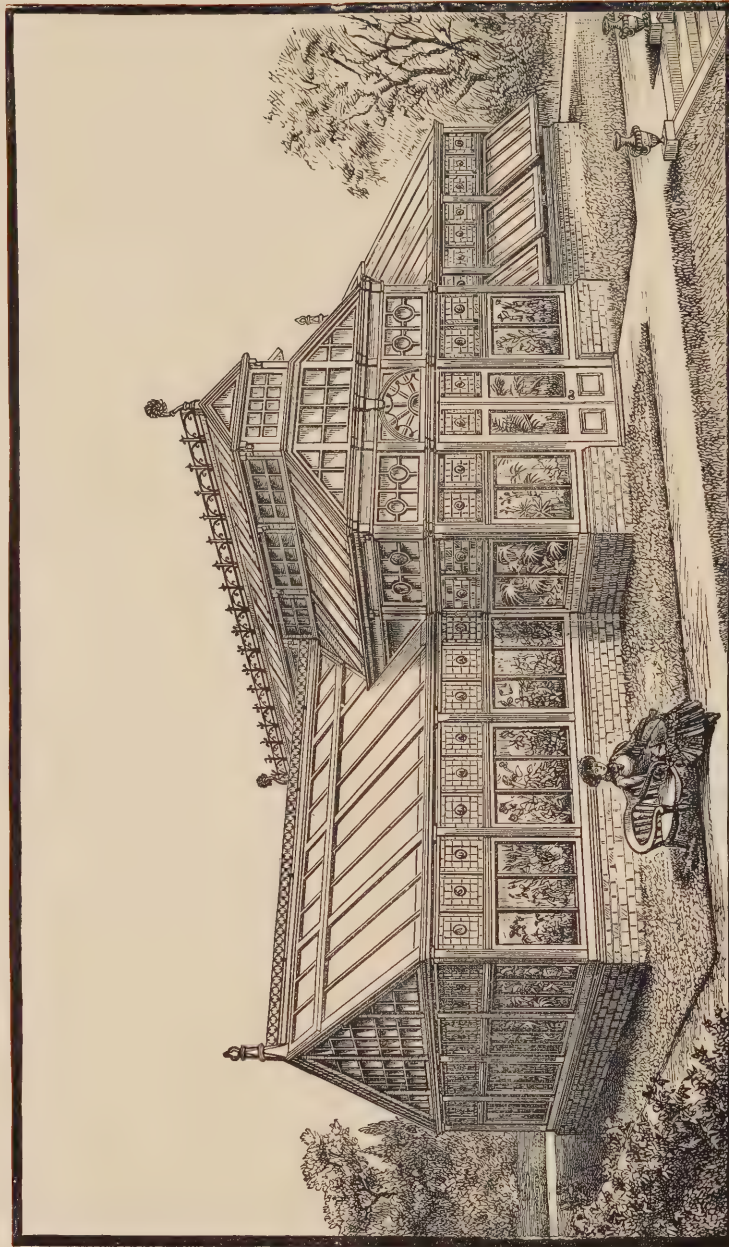


Fig. 8.

CONSERVATORY OR WINTER GARDEN.



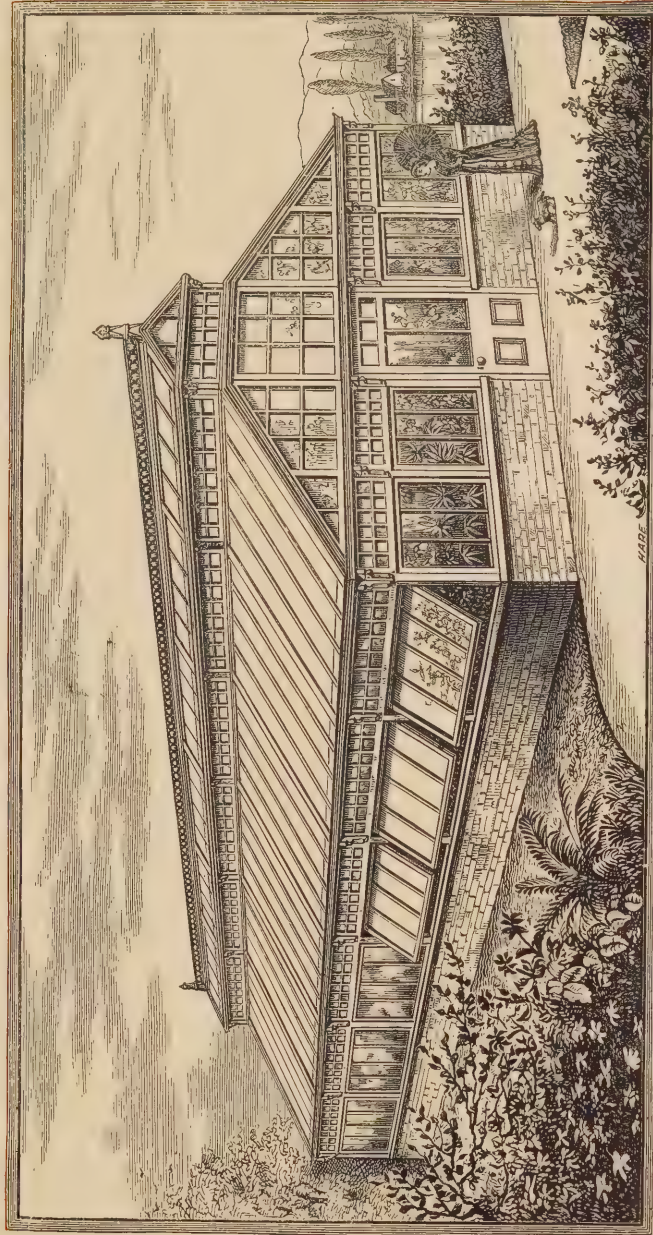


Fig. 9.

SPAN-ROOFED CONSERVATORY WITH "LANTERN."

About 30ft. long, by 18ft. wide.

(Erected for the Right Hon. Lord Gerard, Newmarket, and others.)

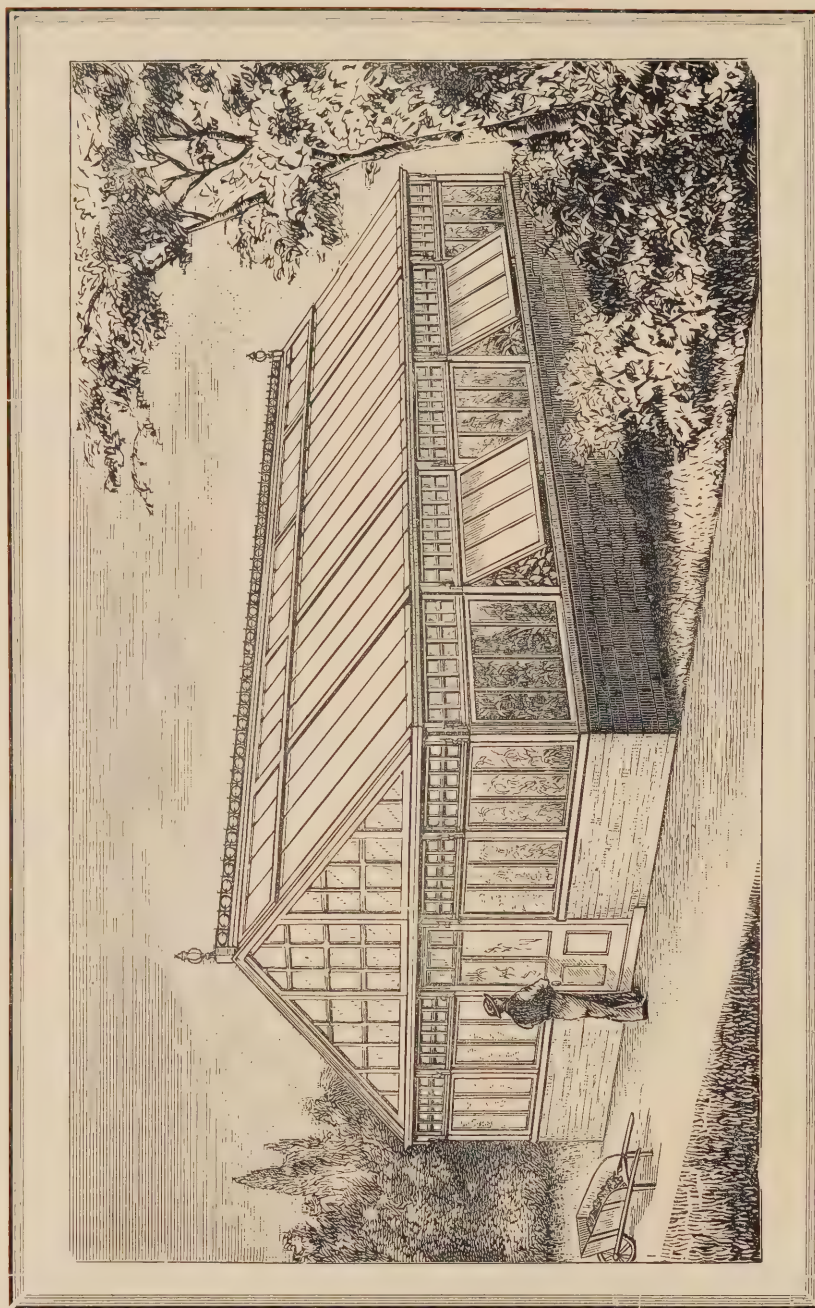


Fig. 10.

## SPAN-ROOFED CONSERVATORY OR GREENHOUSE,

About 25ft. long, by 16ft. wide.



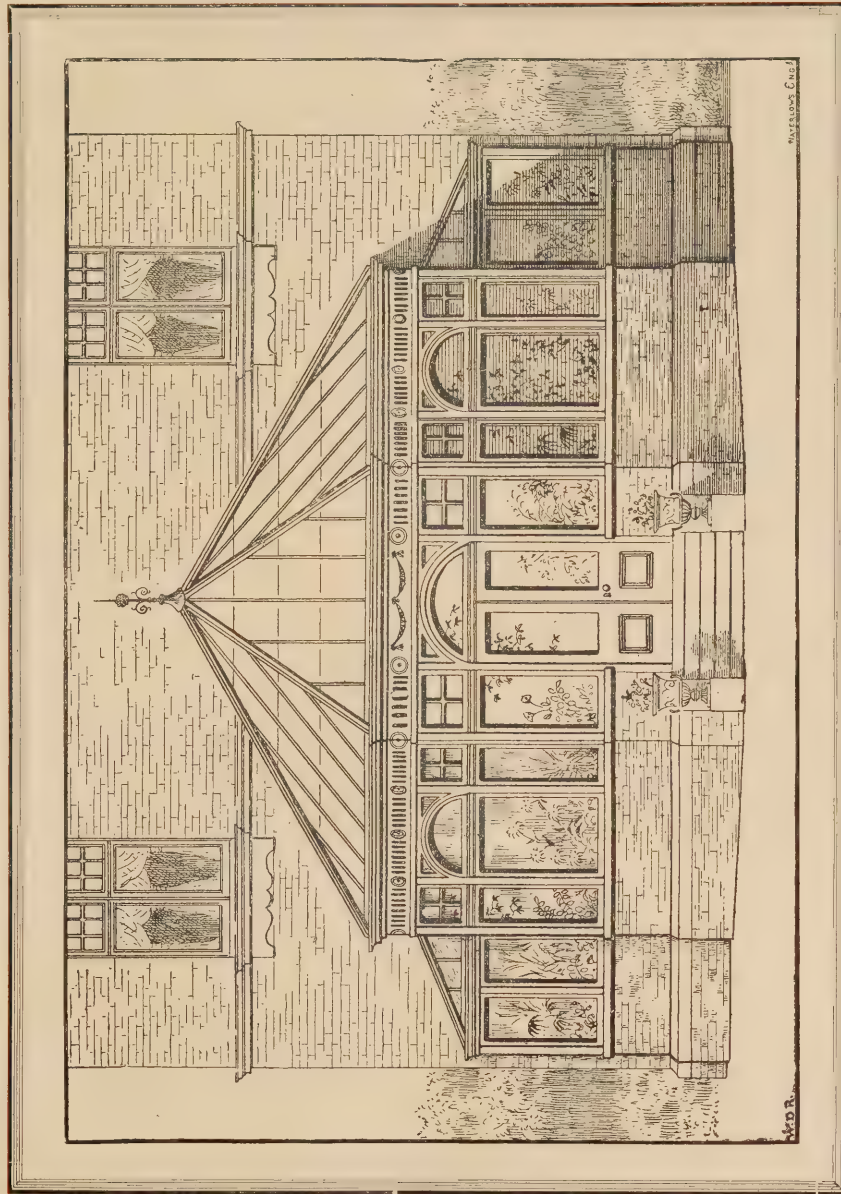
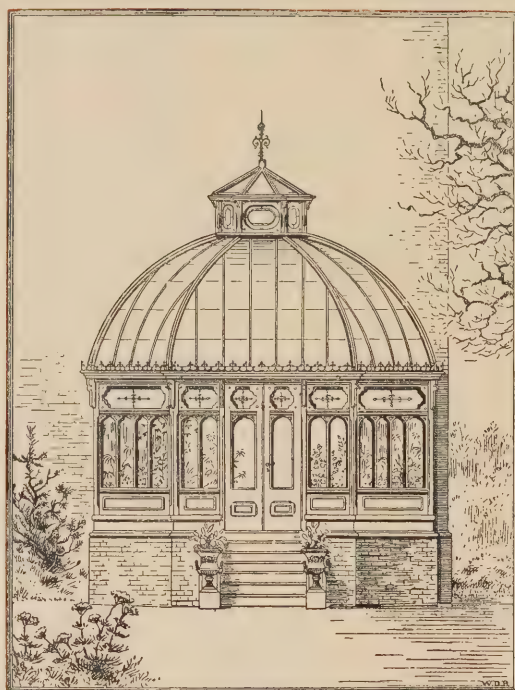


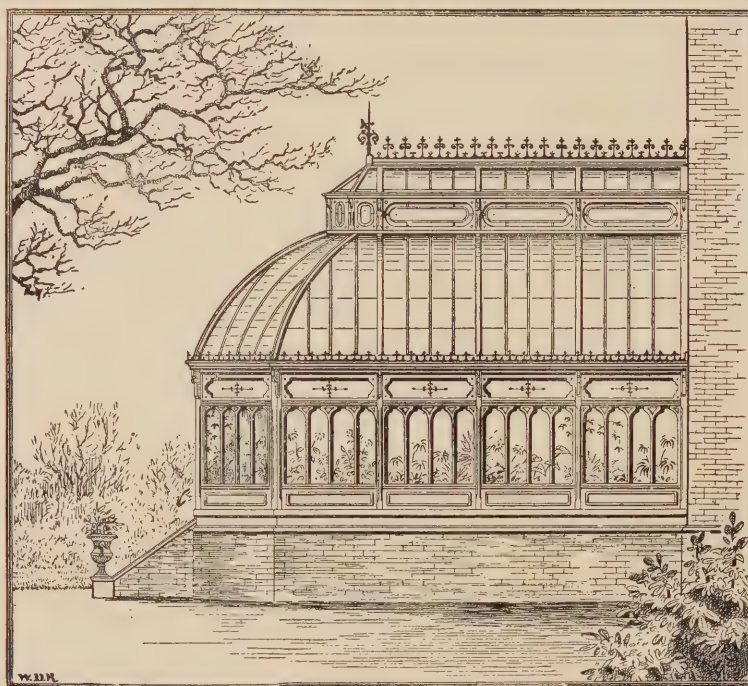
Fig. 11.

# FRONT ELEVATION OF CONSERVATORY

Erected for James R. Roy, Esq., Hanwell, Middlesex.  
 (Architect: Peter Dollar, Esq., London.)



End Elevation.



Side Elevation.

Fig. 12.

**CONSERVATORY**

Erected for John Y. Short, Esq., Sunderland.



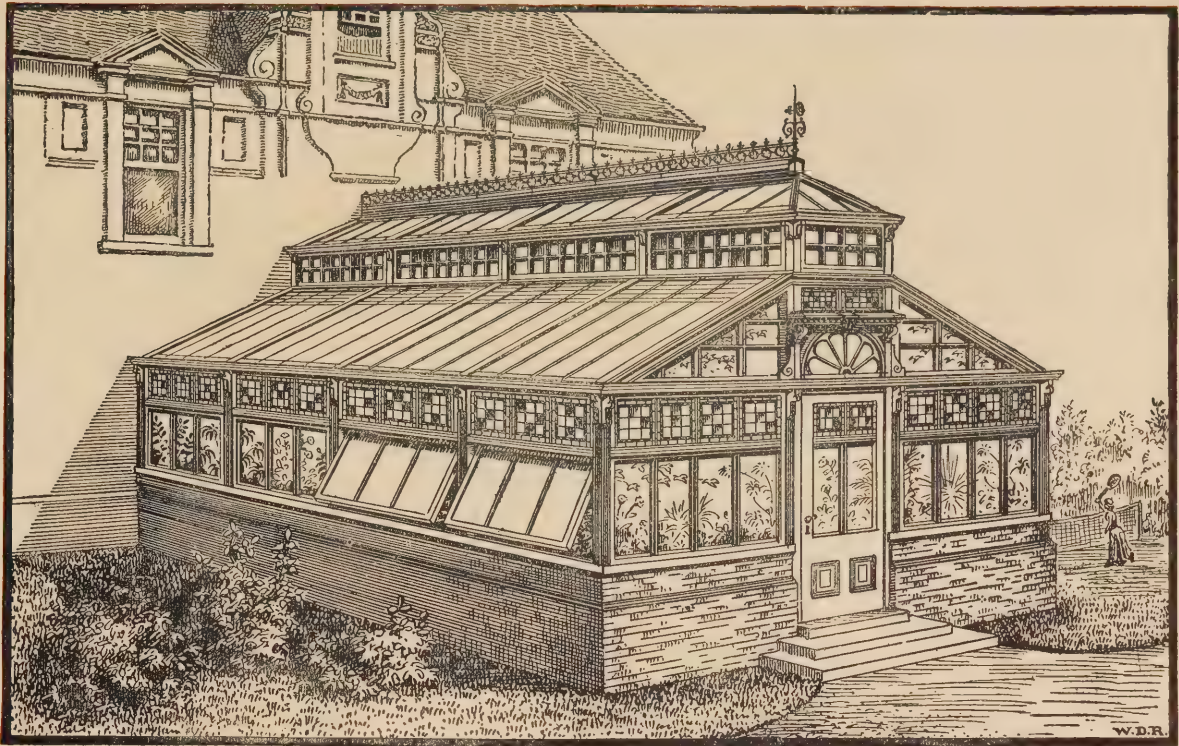


Fig. 13.

### CONSERVATORY

Erected for S. T. Melville, Esq., Wokingham, and others.

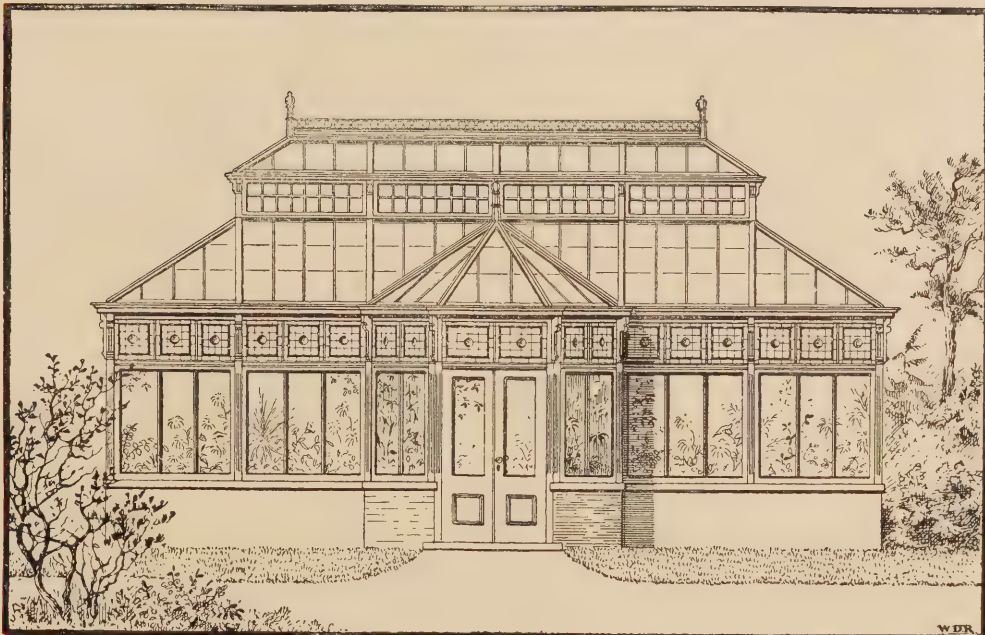


Fig. 14.

### FRONT ELEVATION OF CONSERVATORY

Erected for Wm. Dingley, Esq., M.D., Camden Road, London.



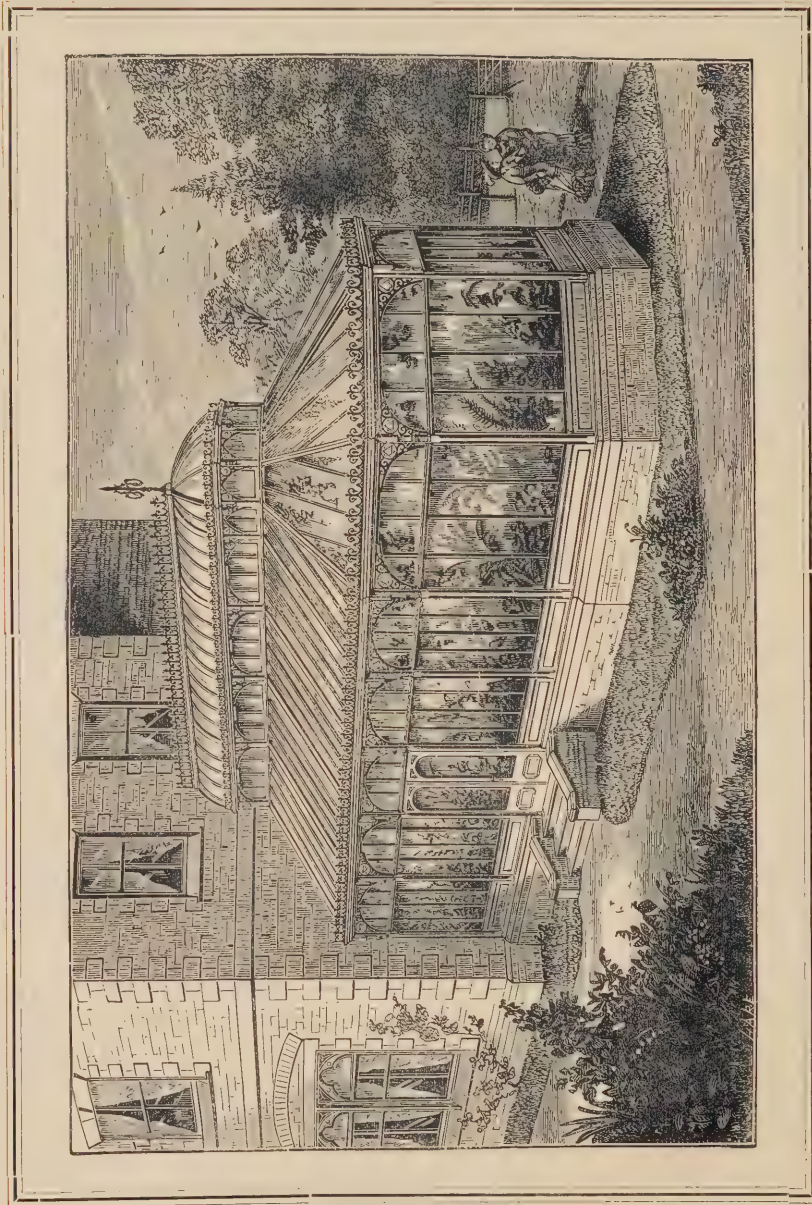


Fig. 15.

## CONSERVATORY.





Fig. 16.

CONSERVATORY

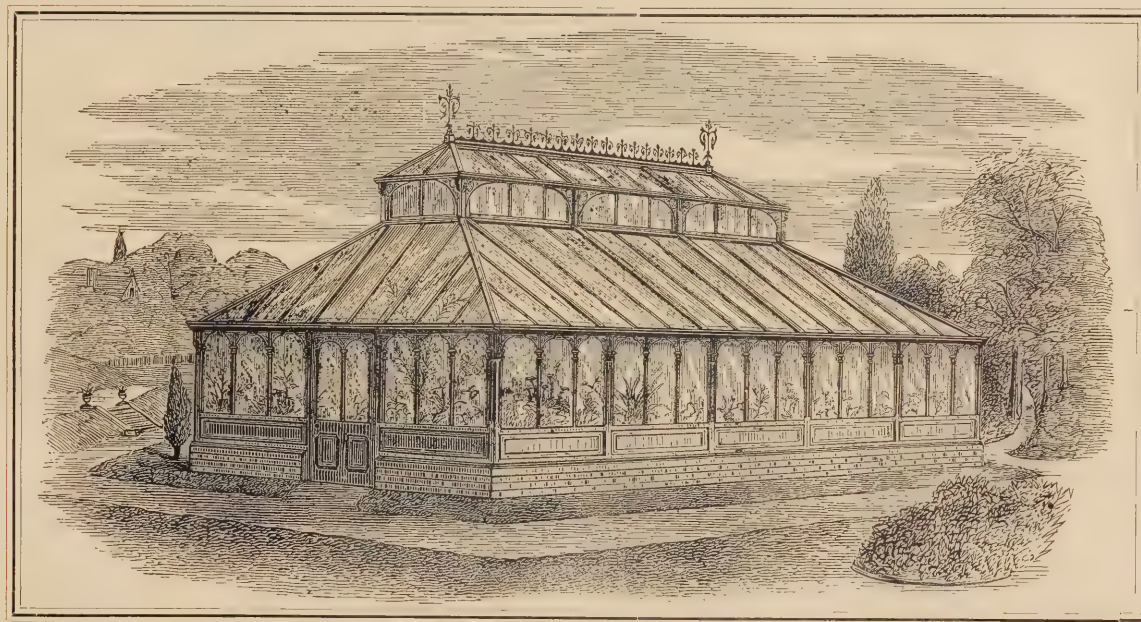


Fig. 17.

CONSERVATORY.





Fig. 18.

**SPAN-ROOFED CONSERVATORY, GREENHOUSE, OR VINERY &c.**

With Richardson's Patent System of Ventilation.

(See Description, Page 6.)



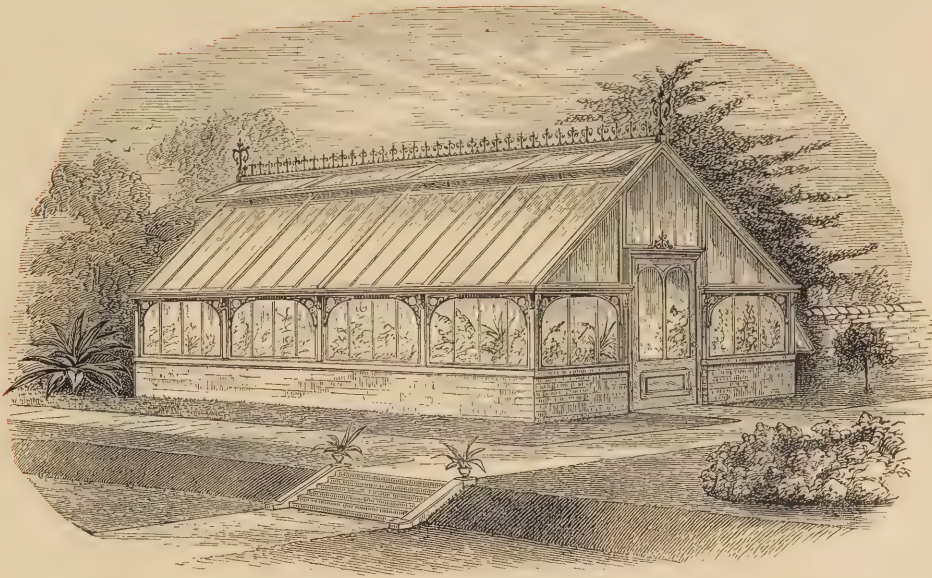


Fig. 19.  
**SPAN-ROOFED CONSERVATORY.**  
About 20ft. long by 14ft. wide.

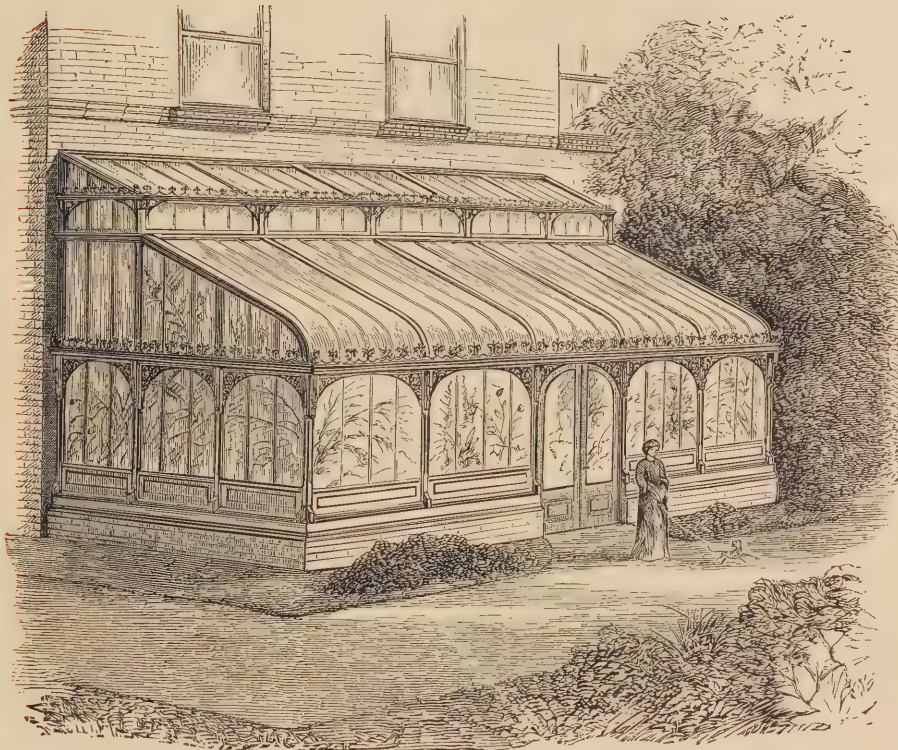


Fig. 20.  
**LEAN-TO CONSERVATORY, WITH "LANTERN" ROOF.**  
About 25ft. long by 14ft. wide.

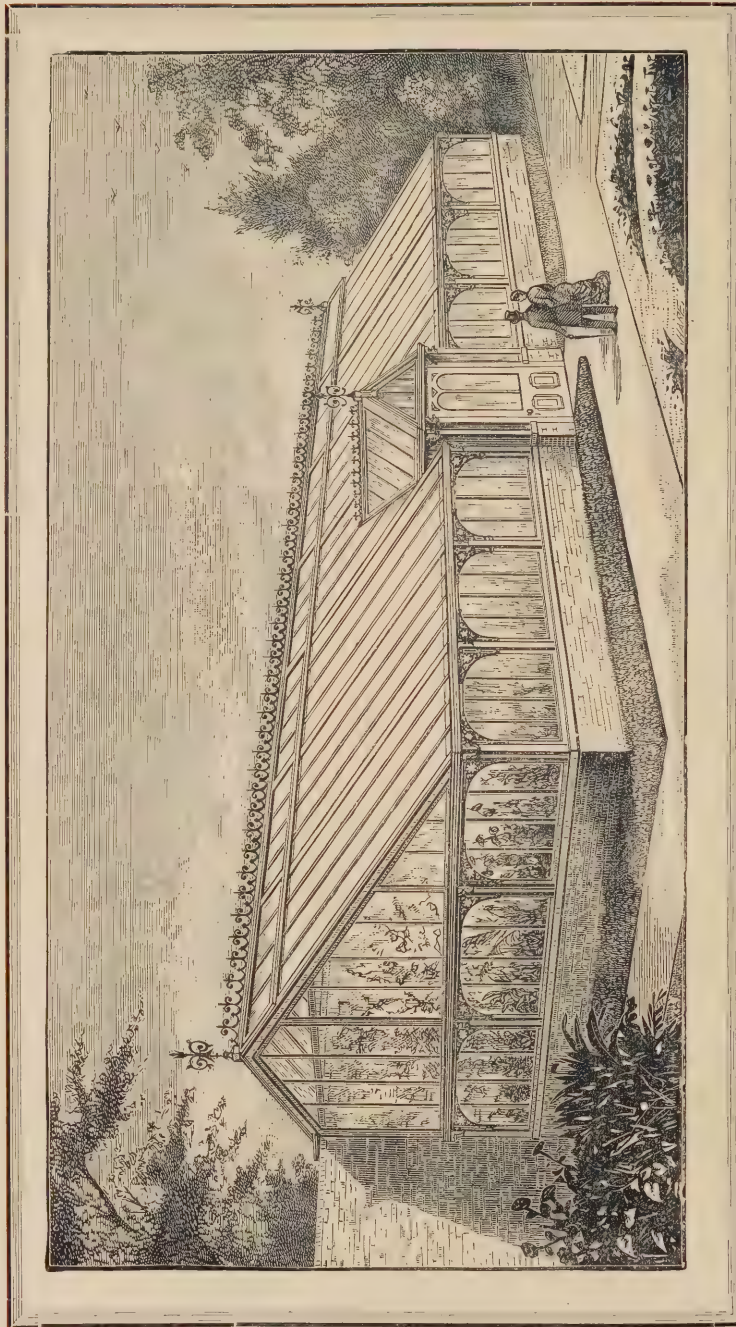


Fig. 21.

HALF-SPAN CONSERVATORY, GREENHOUSE, OR STOVE, &amp;c.



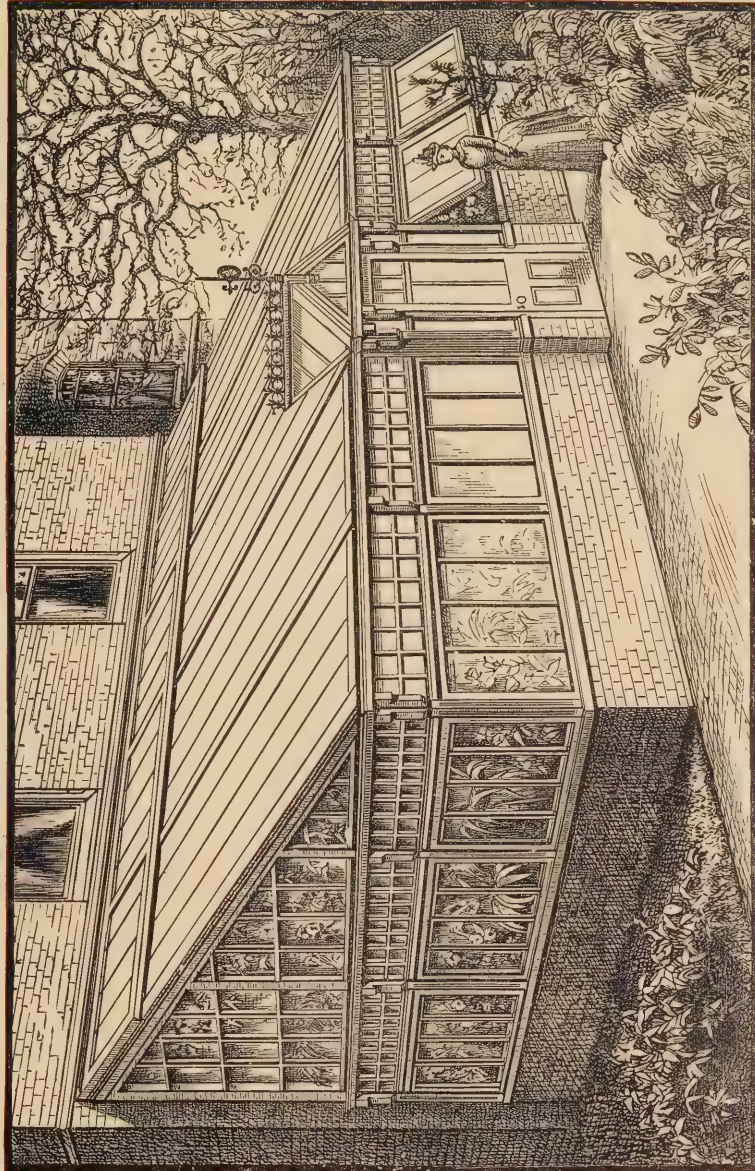


Fig. 22.

LEAN-TO CONSERVATORY OR GREENHOUSE.

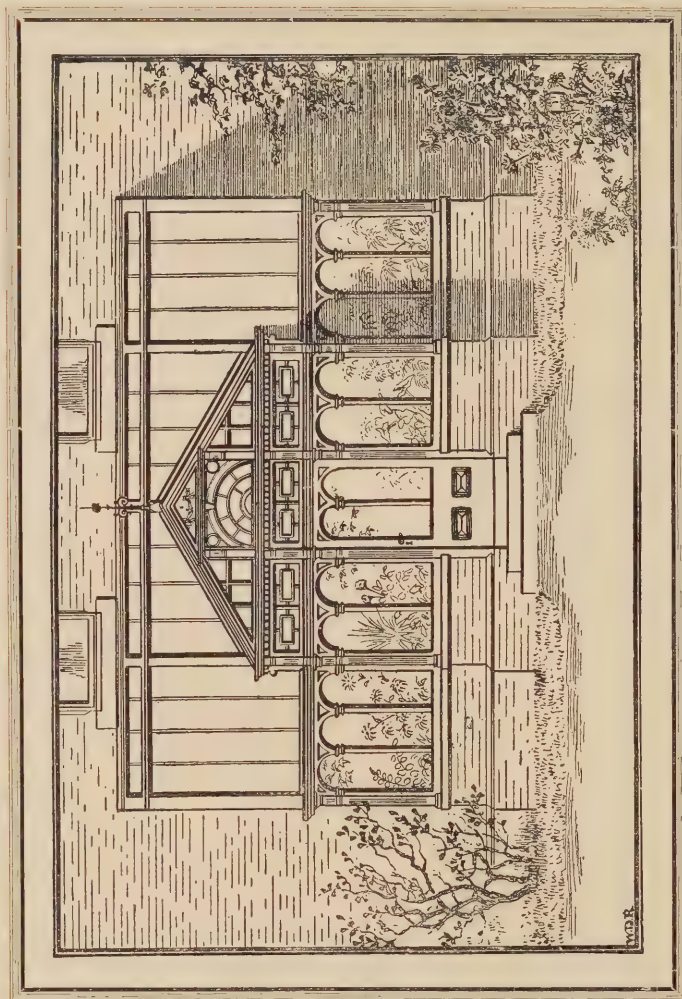


Fig. 23.

## FRONT ELEVATION OF LEAN-TO CONSERVATORY.

About 20ft. long, by 12 or 14ft. wide.



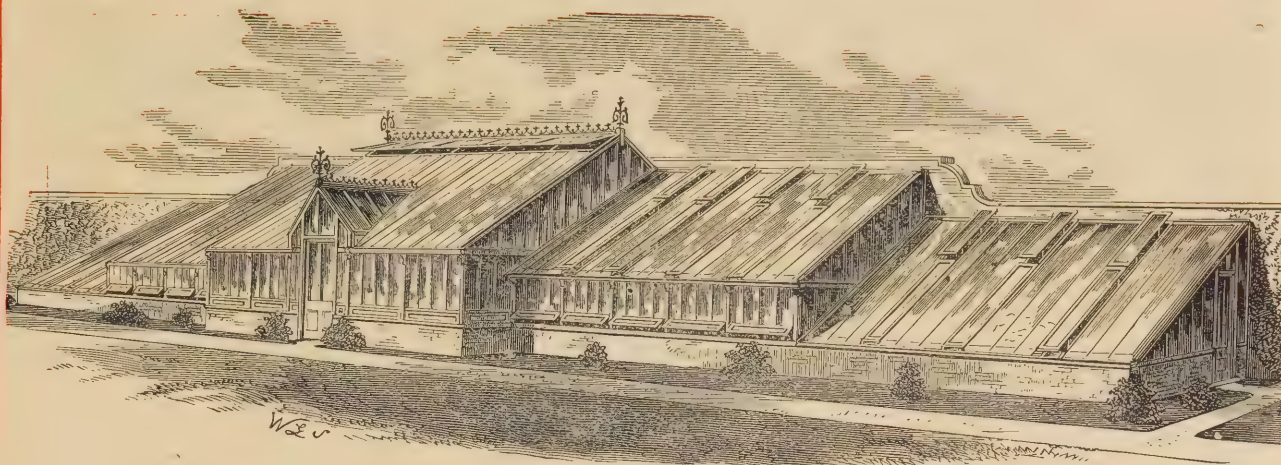


Fig. 24.

**RANGE OF LEAN-TO VINERIES AND PEACH HOUSES,**  
with Half-Span Conservatory or Greenhouse in the Centre.

Richardson's Patent Ventilation to Lean-to portion. (*See description, page 6.*)

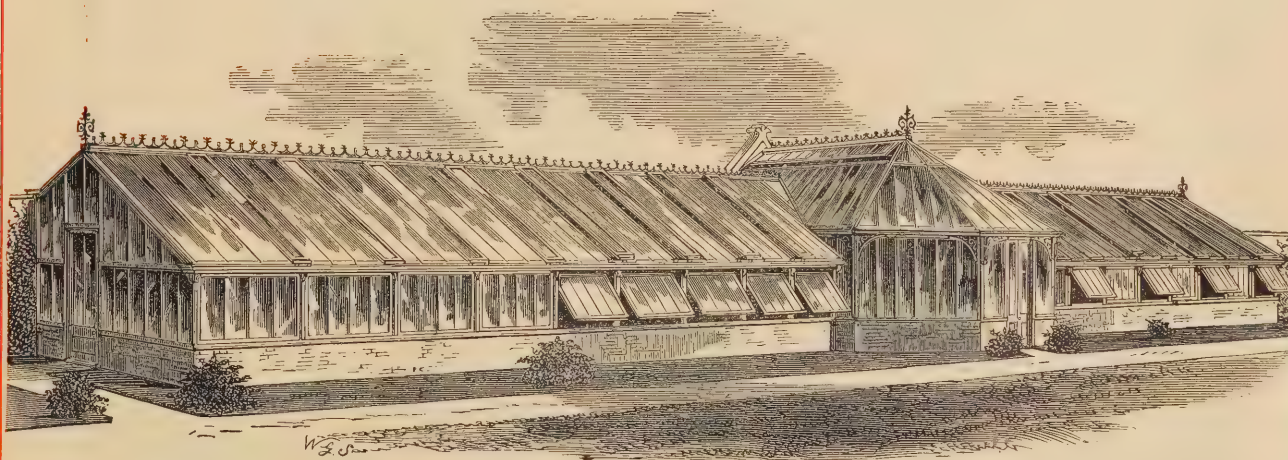


Fig. 25.

**RANGE OF HALF-SPAN FRUIT AND PLANT HOUSES,**  
With Span-roofed Conservatory or Greenhouse in the centre.

Richardson's Patent Ventilation to Half-Span portion. (*See description, page 6.*)

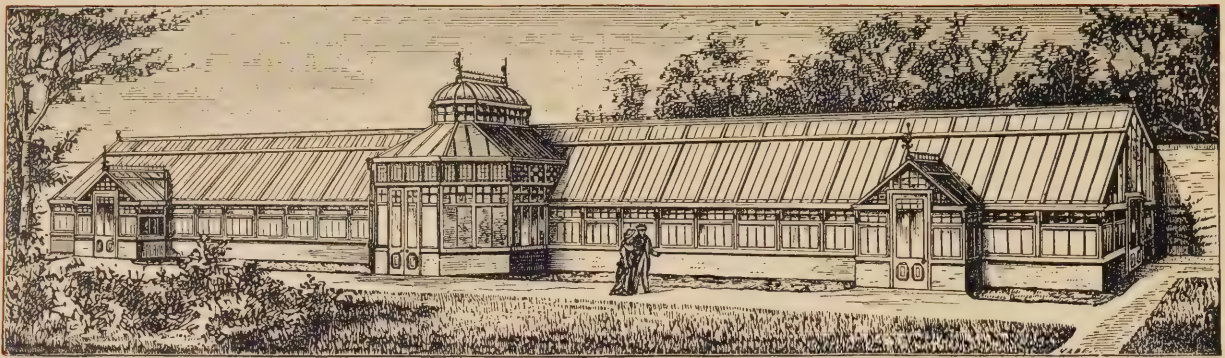


Fig. 26.

**RANGE OF HALF-SPAN FRUIT AND PLANT HOUSES,**  
 With Conservatory or Palm House in centre.

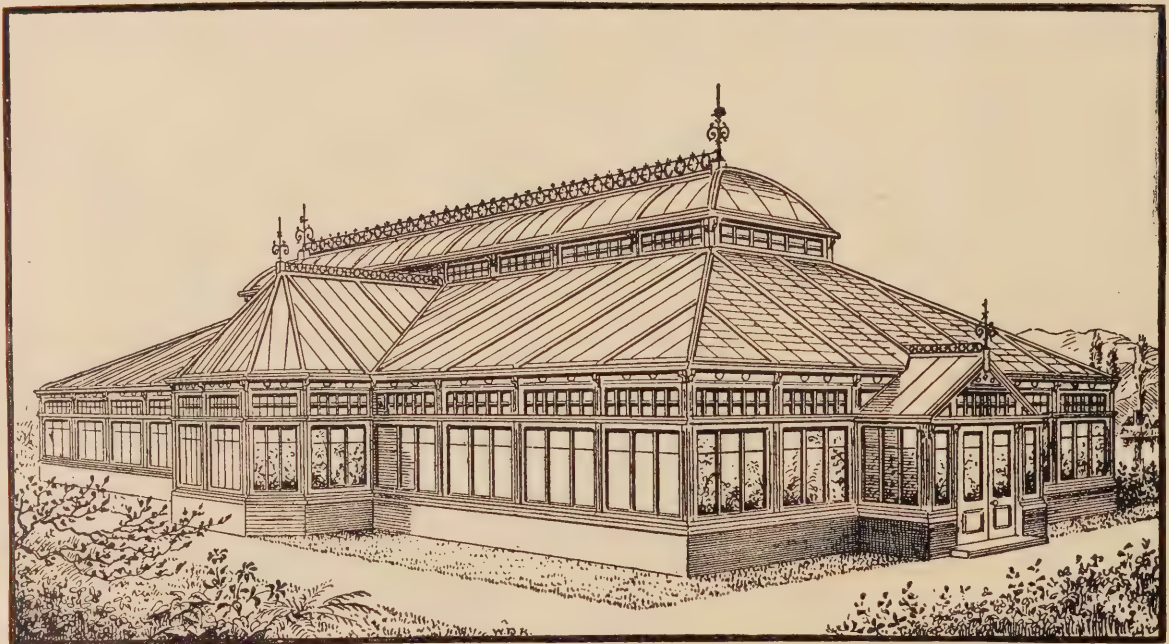
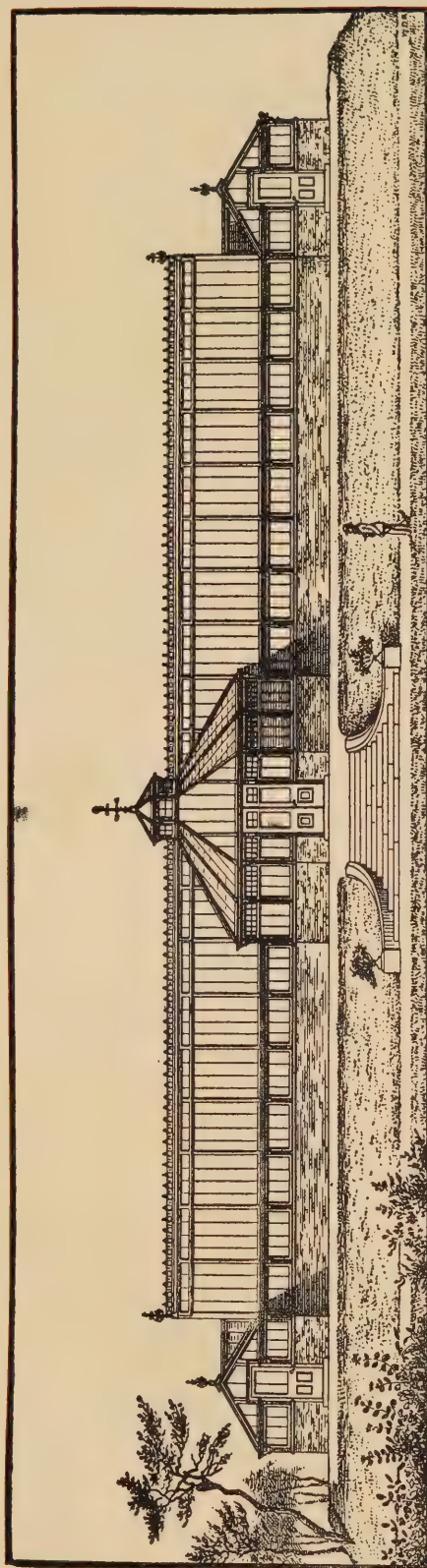


Fig. 27.

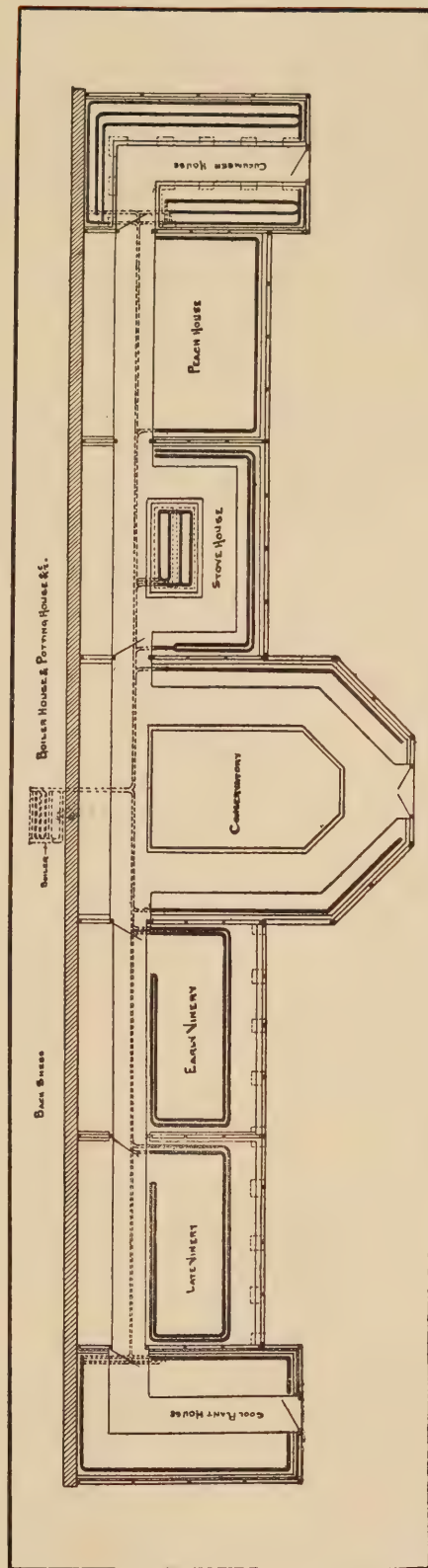
**WINTER GARDEN OR LARGE CONSERVATORY.**

Designed for the Corporation of Bradford Peel Park.





ELEVATION.



PLAN.—Shewing internal arrangement.

Fig. 28.

## RANGE OF FRUIT AND PLANT HOUSES,

(Scale, 16ft. to an inch.)

Erected (with slight deviations) for F. Cobbold, Esq., Felixstowe, Nr. Ipswich. W. H. Fletcher, Esq., Architect, London.

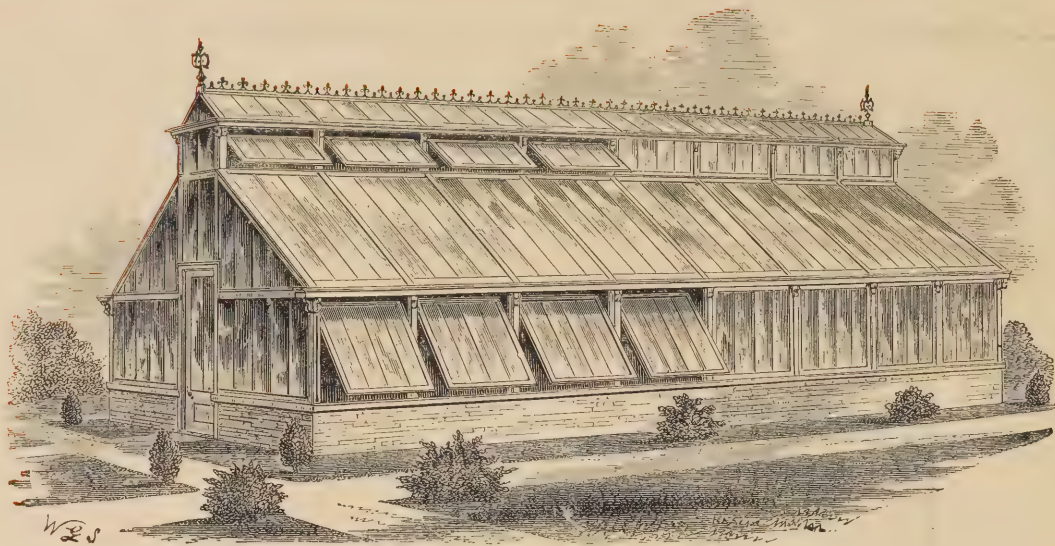


Fig. 29.

SPAN-ROOFED CONSERVATORY, VINERY OR ORCHARD HOUSE, &c.,  
With Lantern Roof.

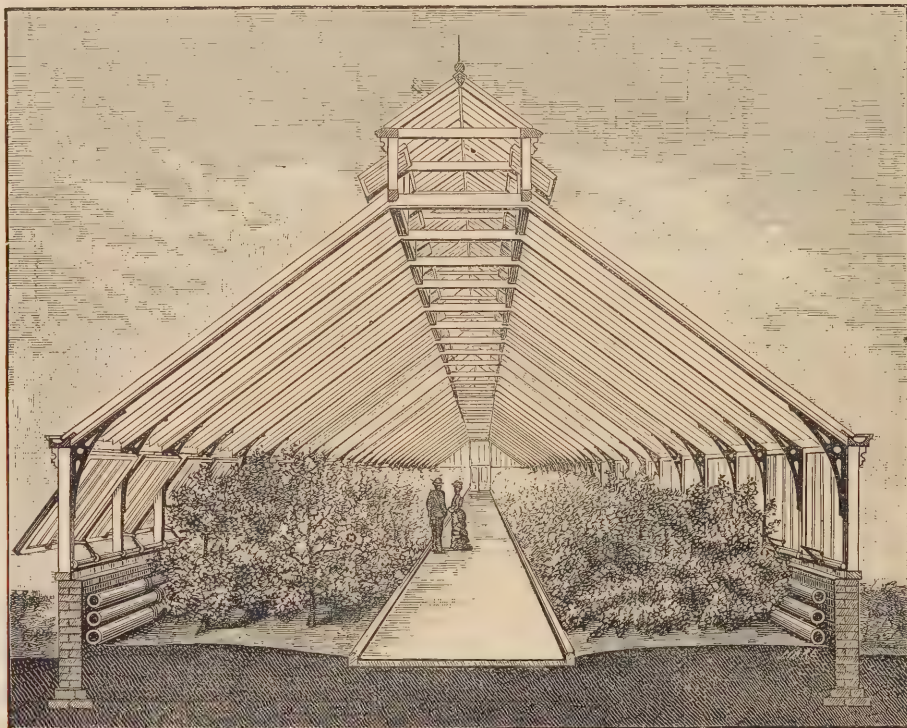


Fig. 30.

SECTION AND INTERNAL VIEW OF HOUSE

Similar to Fig. 29, but larger.



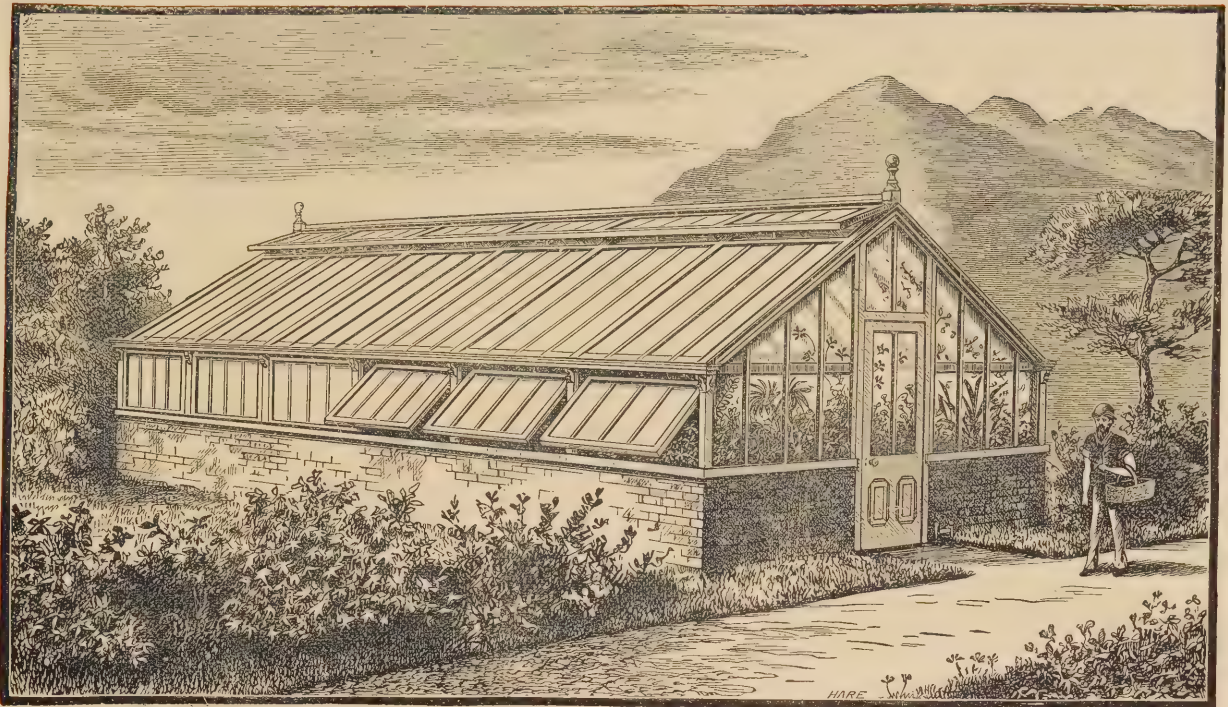


Fig. 31.

## SPAN-ROOFED GREENHOUSE, ORCHID HOUSE OR VINERY, &c.

About 30ft. long, by 16ft. wide.

### Price List.

(For Specification, giving full particulars, see page 7.)

Length of House.	Width, 10ft. Height, 8ft. 6in.	Width, 12ft. Height, 9ft. 6in.	Width, 14ft. Height, 10ft.	Width, 16ft. Height, 10ft. 6in.	Width, 18ft. Height, 11ft. 6in.	Width, 20ft. Height, 12ft. 6in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	26 10 0	30 15 0	35 0 0	39 0 0	43 5 0	47 10 0
20 0	32 15 0	37 10 0	42 5 0	46 15 0	51 15 0	56 10 0
25 0	39 0 0	44 0 0	49 10 0	54 10 0	60 0 0	65 10 0
30 0	45 0 0	50 10 0	56 10 0	62 10 0	68 10 0	74 10 0
35 0	51 0 0	57 5 0	63 15 0	70 5 0	76 15 0	83 10 0
40 0	57 0 0	63 15 0	71 0 0	78 0 0	85 5 0	92 10 0
50 0	69 0 0	77 0 0	85 10 0	93 10 0	102 0 0	110 5 0
60 0	81 0 0	90 5 0	99 15 0	109 5 0	118 15 0	128 5 0
70 0	93 0 0	103 10 0	114 5 0	124 15 0	135 10 0	146 5 0
80 0	105 0 0	116 15 0	128 15 0	140 5 0	152 10 0	164 0 0
90 0	117 0 0	130 0 0	143 0 0	156 0 0	169 5 0	182 0 0
100 0	129 0 0	143 5 0	157 10 0	171 15 0	186 0 0	200 0 0
Partitions,* each	5 0 0	5 15 0	6 10 0	7 5 0	8 0 0	8 15 0

Height of Sides, 5ft. 6in. (2ft. 6in. Brickwork).

Lengths and Widths are measured outside of the wood uprights in side and end framing.

Top Ventilators in alternate bays only, of houses 10ft. wide and under; in *all* bays of wider houses.

Bottom Ventilators in alternate bays both sides; (slight extra cost if *all* bays are ventilated.)

\* The Price of each Partition includes a door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted (See Specification).

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



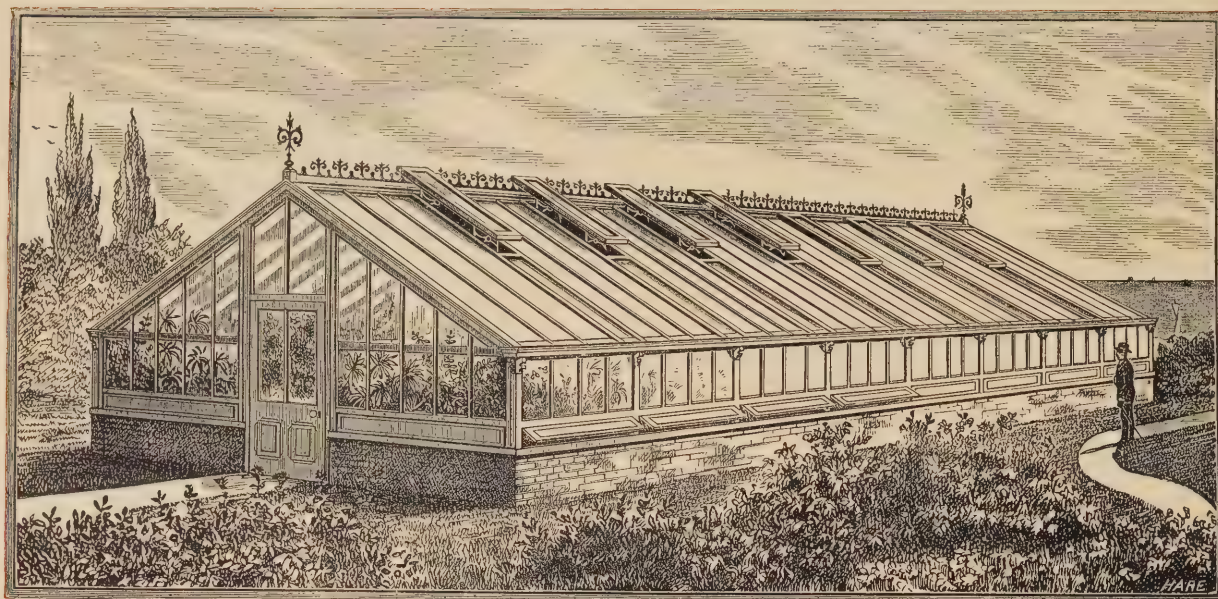


Fig. 32.

## SPAN-ROOFED GREENHOUSE, STOVE OR VINERY, &c.,

About 40ft. long, by 18ft. wide,

With **Richardson's Patent** System of Ventilation. Patent Ventilators to the further side of the roof extend from ridge to eaves, as in Fig. 40.

### Price List.

(For complete description of Patent Ventilation, see page 6. For Specification, see page 7.)

Length of House.	Width, 18ft. Height, 8ft. 5in.	Width, 12ft. Height, 9ft.	Width, 14ft. Height, 9ft. 7in.	Width, 16ft. Height 10ft. 2in.	Width, 18ft. Height, 10ft. 9in.	Width, 20ft. Height, 11ft. 4in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	35 10 0	39 15 0	44 0 0	48 5 0	52 10 0	56 15 0
20 0	44 0 0	49 0 0	53 15 0	58 10 0	63 10 0	68 10 0
25 0	52 10 0	58 0 0	63 10 0	69 0 0	74 10 0	80 0 0
30 0	61 0 0	67 5 0	73 5 0	79 10 0	85 10 0	91 15 0
35 0	69 10 0	76 5 0	83 0 0	89 15 0	96 10 0	103 10 0
40 0	78 0 0	85 10 0	92 15 0	100 5 0	107 15 0	115 0 0
50 0	95 0 0	103 15 0	112 5 0	121 0 0	129 15 0	138 10 0
60 0	112 0 0	122 0 0	132 0 0	141 15 0	151 15 0	161 15 0
70 0	129 0 0	140 5 0	151 10 0	162 10 0	173 15 0	185 0 0
80 0	146 0 0	158 10 0	171 0 0	183 10 0	196 0 0	208 10 0
90 0	163 0 0	176 15 0	190 10 0	204 5 0	218 0 0	231 15 0
100 0	180 0 0	195 0 0	210 0 0	225 0 0	240 0 0	255 0 0
Partitions * each	5 5 0	6 5 0	7 0 0	7 15 0	8 10 0	9 5 0

Height of Sides, 5ft. 3in. (1ft. 9in. Brickwork.)

Lengths and Widths are measured outside of wood uprights in side and end framing.

Complete simultaneous Ventilator Gearing included throughout. (See Specification.)

\* The Price of each Partition includes a Door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (See Specification.)

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



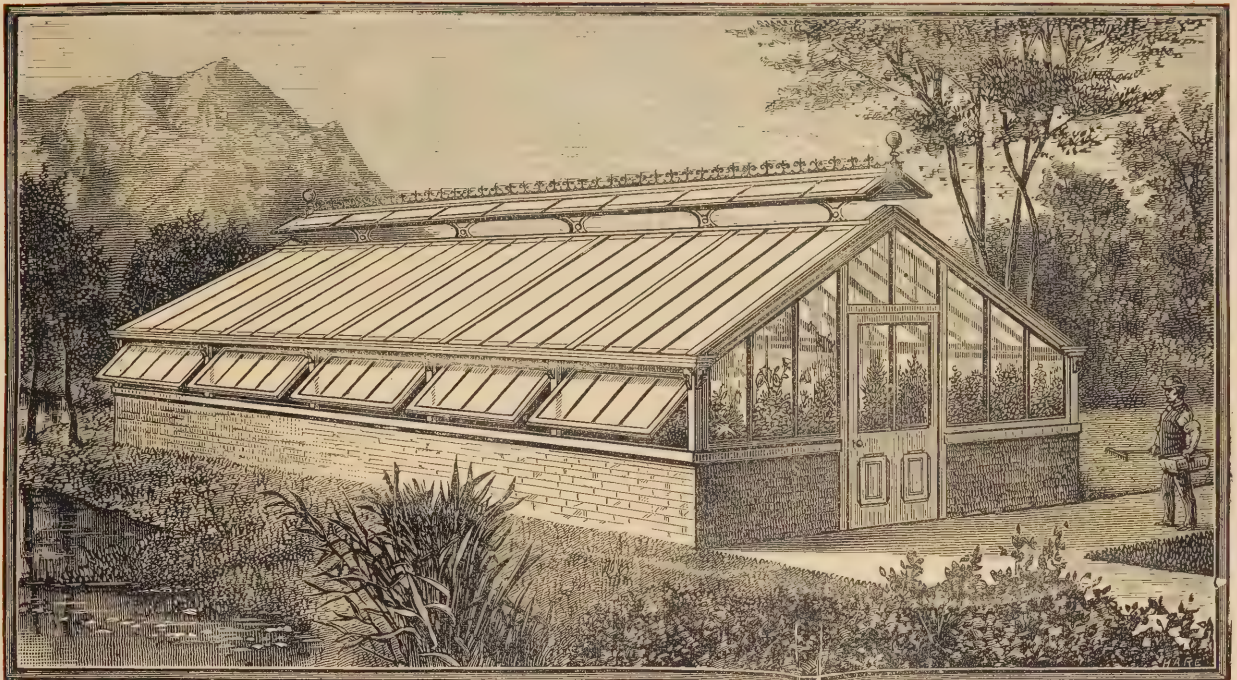


Fig. 33.

## SPAN-ROOFED FORCING HOUSE, ORCHID HOUSE, CUCUMBER HOUSE, OR GREENHOUSE,

About 25ft. long, by 12ft. wide.

(See Section next page.)

### Price List.

(For Specification, giving full particulars, see page 7.)

Length of House.	Width, 9ft. Height, 8ft. 6in.	Width, 10ft. Height, 8ft. 10in.	Width 11ft. Height, 9ft. 1in.	Width, 12ft. Height, 9ft. 5in.	Width, 13ft. Height, 9ft. 8in.	Width, 14ft. Height, 10ft.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	26 10 0	28 5 0	30 5 0	32 0 0	33 15 0	35 15 0
20 0	32 15 0	35 0 0	37 5 0	39 5 0	41 5 0	43 10 0
25 0	39 5 0	41 10 0	44 0 0	46 5 0	48 10 0	51 0 0
30 0	45 10 0	48 5 0	51 0 0	53 10 0	56 0 0	58 15 0
35 0	52 0 0	54 15 0	57 15 0	60 10 0	63 10 0	66 10 0
40 0	58 5 0	61 10 0	64 15 0	67 15 0	70 15 0	74 0 0
50 0	71 0 0	74 15 0	78 10 0	82 0 0	85 15 0	89 10 0
60 0	83 15 0	88 0 0	92 5 0	96 5 0	100 10 0	104 15 0
70 0	96 10 0	101 5 0	106 0 0	110 15 0	115 5 0	120 0 0
80 0	109 5 0	114 10 0	119 15 0	125 0 0	130 0 0	135 5 0
90 0	122 0 0	127 15 0	133 10 0	139 5 0	145 0 0	150 15 0
100 0	134 15 0	141 0 0	147 5 0	153 10 0	159 15 0	166 0 0
Partitions * each	5 5 0	5 15 0	6 0 0	6 10 0	6 15 0	7 5 0

Height of Sides, 5ft. 6in. (3ft. Brickwork.)

Lengths and Widths are measured outside of the wood uprights in side and end framing.

Top Ventilation by glazed Lifting Ridge, with simultaneous iron gearing.

Bottom Ventilation by alternate opening Sashes both sides. (Slight extra cost if all sashes open as shewn above.)

\* The price of each partition includes a Door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (See Specification.)

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

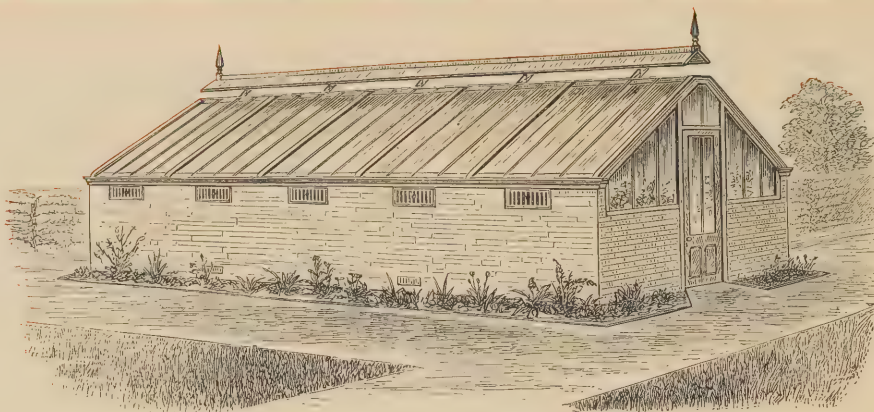


Fig. 34.

## SPAN-ROOFED CUCUMBER & MELON HOUSE or FORCING HOUSE,

About 25ft. long, by 10ft. wide.

(See Section. Fig. 35.)

### Price List.

(For Specification, giving full particulars, see page 7.)

Length of House.	Width 9ft. Height, 7ft.	Width, 10ft. Height, 7ft. 4in.	Width, 11ft. Height, 7ft. 7in.	Width, 12ft. Height, 7ft. 11in.	Width, 13ft. Height, 8ft. 2in.	Width, 14ft. Height, 8ft. 6in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	17 5 0	18 10 0	19 15 0	21 5 0	22 10 0	23 15 0
20 0	21 5 0	22 15 0	24 5 0	25 15 0	27 5 0	28 15 0
25 0	25 5 0	26 15 0	28 10 0	30 10 0	32 5 0	33 15 0
30 0	29 0 0	31 0 0	33 0 0	35 0 0	37 0 0	39 0 0
35 0	33 0 0	35 5 0	37 5 0	39 15 0	41 15 0	44 0 0
40 0	37 0 0	39 10 0	41 15 0	44 5 0	46 15 0	49 0 0
50 0	45 0 0	47 15 0	50 10 0	53 10 0	56 5 0	59 5 0
60 0	52 15 0	56 0 0	59 5 0	62 15 0	66 0 0	69 5 0
70 0	60 15 0	64 10 0	68 0 0	72 0 0	75 15 0	79 10 0
80 0	68 15 0	72 15 0	77 0 0	81 5 0	85 10 0	89 10 0
90 0	76 19 0	81 5 0	85 15 0	90 10 0	95 0 0	99 15 0
100 0	84 10 0	89 10 0	94 10 0	99 15 0	104 15 0	109 15 0
Partitions * each	4 10 0	4 15 0	5 0 0	5 10 0	5 15 0	6 5 0

Height of Sides, 4ft. (3ft. 9in. of sides and 2ft. 10½in. of ends, brickwork.)

Lengths and Widths are measured outside of walls.

Top Ventilation by Lifting Ridge, with simultaneous iron gearing.

Iron or wood Sliding Ventilators for side walls, supplied at an extra cost of 2/6 to 5/- each.

\* The cost of each Partition includes a Door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (See Specification.)

TERMS: NET CASH.

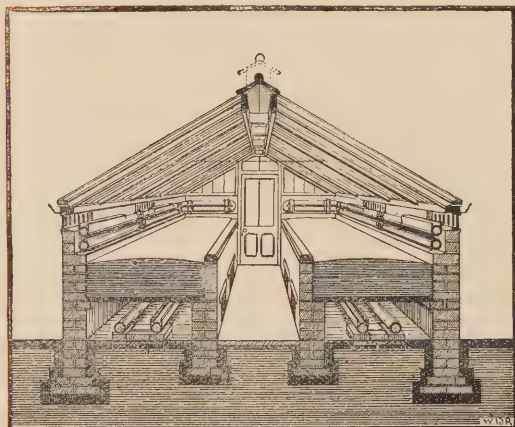


Fig. 35.

### SECTION OF SPAN-ROOFED HOUSE Fig. 34

Shewing interior Forcing Pits and Hot Water Pipes, &c.  
(These not included in the Price List.)

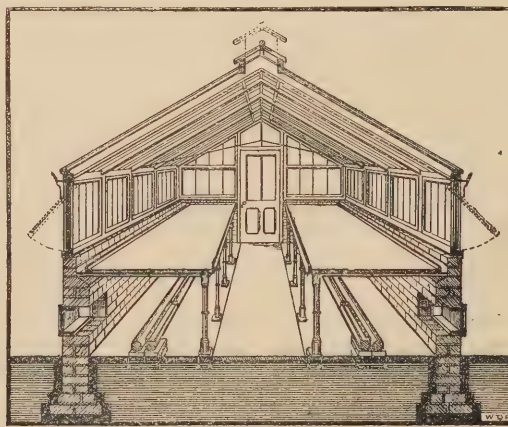


Fig. 36.

### SECTION OF SPAN-ROOFED HOUSE Fig. 33

Shewing Iron Staging and Hot Water Pipes.  
(These not included in the Price List.)

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



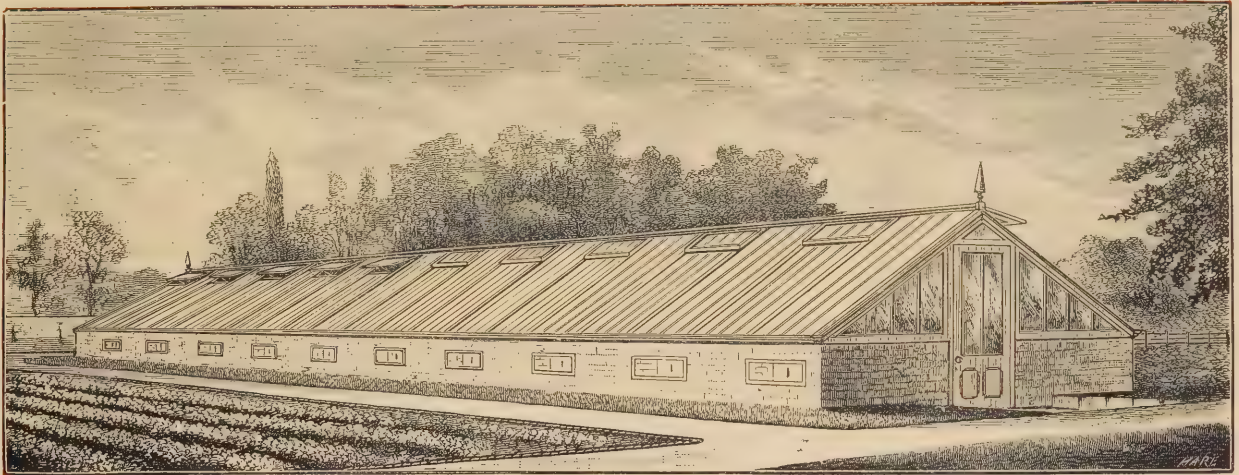


Fig. 37.

## SPAN-ROOFED "NURSERYMAN'S" PLANT HOUSE,

About 100ft. long, by 14ft. wide.

**Price List.***(For Specification, see page 7.)*

Length of House.	Width, 10ft. Height, 7ft. 4in.	Width, 12ft. Height, 7ft. 11in.	Width, 14ft. Height, 8ft. 6in.	Width, 16ft. Height, 9ft. 1in.	Width, 18ft. Height, 9ft. 8in.	Width, 20ft. Height, 10ft. 3in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	15 0 0	17 15 0	20 15 0	23 10 0	26 10 0	29 5 0
20 0	18 10 0	21 15 0	25 5 0	28 10 0	32 0 0	35 5 0
25 0	22 0 0	25 15 0	29 15 0	33 10 0	37 10 0	41 5 0
30 0	25 10 0	30 0 0	34 5 0	38 15 0	43 0 0	47 10 0
35 0	29 0 0	34 0 0	38 15 0	43 15 0	48 10 0	53 10 0
40 0	32 10 0	38 0 0	43 5 0	48 15 0	54 0 0	59 10 0
50 0	39 10 0	46 0 0	52 5 0	58 15 0	65 0 0	71 10 0
60 0	46 10 0	54 0 0	61 10 0	68 15 0	76 5 0	83 15 0
70 0	53 10 0	62 0 0	70 10 0	78 15 0	87 5 0	95 15 0
80 0	60 10 0	70 0 0	79 10 0	88 15 0	98 5 0	107 15 0
90 0	67 10 0	78 0 0	88 10 0	99 0 0	109 10 0	120 0 0
100 0	74 10 0	86 0 0	97 10 0	109 0 0	120 0 0	132 0 0
Partitions * each	3 0 0	3 10 0	4 0 0	4 15 0	5 10 0	6 0 0

Height of Sides, 4ft. (3ft. 9in. Brickwork.)

Lengths and Widths are measured outside of walls.

Top Ventilation by opening Lights to alternate bays one side of ridge.

Iron or wood Sliding Ventilators for side walls supplied at an extra cost of 2/6 to 5/- each.

\* The price of each Partition includes a Door, with latch, &amp;c., complete.

Carriage Paid and Fixed, Glazed and Painted. *(See Specification.)***TERMS : NET CASH.**

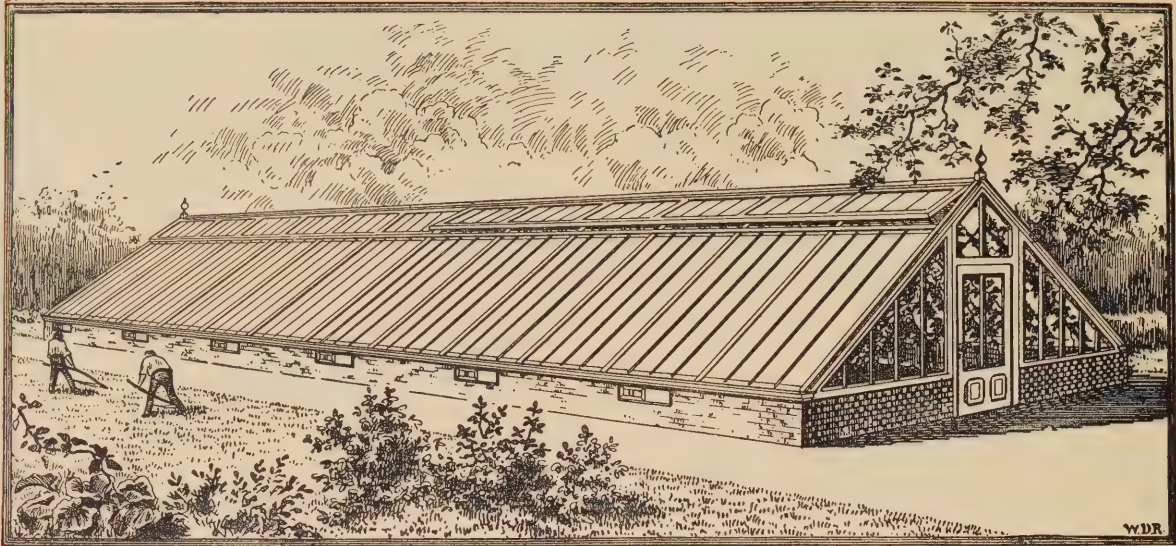


Fig. 38.

### SPAN-ROOFED VINERY OR ORCHARD HOUSE,

About 60ft. long by 20ft. wide.

See Price List of Fig. 37. Cost of Fig. 38 being slightly more than Fig. 37 for same sizes.

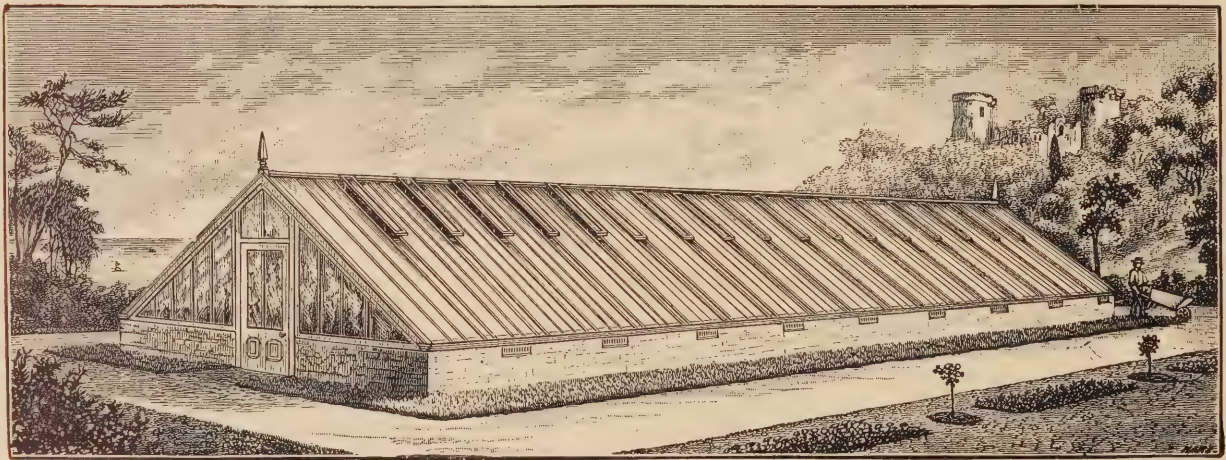


Fig. 39.

### SPAN-ROOFED VINERY OR ORCHARD HOUSE.

About 100ft. long by 20ft. wide.

With Richardson's Patent System of Ventilation.

Patent Ventilators to further side of Roof extend from Ridge to Eaves as in Fig. 40.

*For complete description of this System, see page 6.*



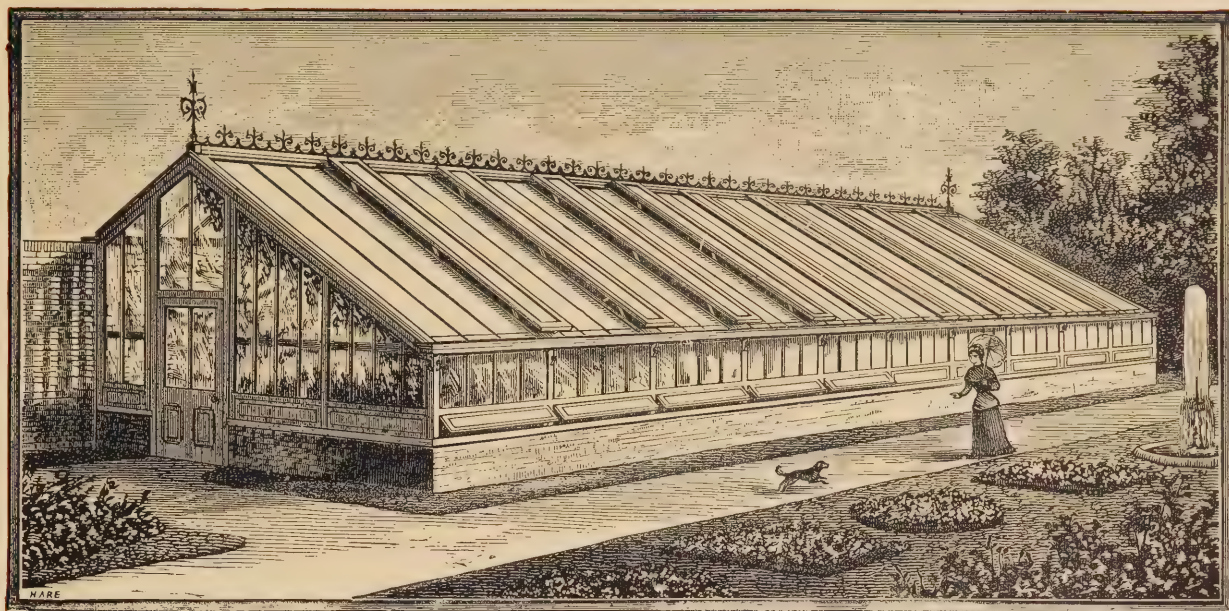


Fig. 40.

## HALF-SPAN VINERY OR GREENHOUSE.

About 50ft. long by 16ft. wide.

With Richardson's Patent System of Ventilation. Patent Ventilators to both sides of Roof.

### Price List.

(For complete Description, see page 6. For Specification, see page 7.)

LENGTH OF HOUSE.	Width 8ft.	Width 10ft.	Width 12ft.	Width 14ft.	Width 16ft.	Width 18ft.
	Height of back wall 6ft. 6in. Height to top of ridge 8ft. 9in.	Height of back wall 7ft. 3in. Height to top of ridge 9ft. 8in.	Height of back wall 8ft. Height to top of ridge roft. 7in.	Height of back wall 8ft. 9in. Height to top of ridge 11ft. 6in.	Height of back wall 9ft. 3in. Height to top of ridge 12ft. 5in.	Height of back wall roft. Height to top of ridge 13ft. 4in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	27 0 0	32 0 0	37 0 0	42 0 0	47 0 0	52 0 0
20 0	33 0 0	38 15 0	44 5 0	50 0 0	55 10 0	61 5 0
25 0	39 0 0	45 10 0	51 15 0	58 0 0	64 5 0	70 10 0
30 0	45 5 0	52 0 0	59 0 0	66 0 0	73 0 0	80 0 0
35 0	51 5 0	58 15 0	66 10 0	74 0 0	81 10 0	89 5 0
40 0	57 5 0	65 10 0	73 15 0	82 0 0	90 5 0	98 10 0
50 0	69 10 0	79 0 0	88 10 0	98 0 0	107 10 0	117 0 0
60 0	81 10 0	92 10 0	103 5 0	114 0 0	124 15 0	135 15 0
70 0	93 15 0	105 15 0	118 0 0	130 0 0	142 0 0	154 5 0
80 0	105 15 0	119 5 0	132 10 0	146 0 0	159 10 0	172 15 0
90 0	118 0 0	132 10 0	147 5 0	162 0 0	176 15 0	191 10 0
100 0	130 0 0	146 0 0	162 0 0	178 0 0	194 0 0	210 0 0
Partitions * each	4 15 0	6 0 0	7 0 0	8 0 0	9 0 0	9 15 0

Height of Front, 5ft. 3in. (1ft. 9in. Brickwork.)

Lengths and widths are measured outside of wood uprights in side and end framing.

Complete simultaneous Ventilator Gearing is included throughout. (See Specification.)

\* The Price of each Partition includes a door with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (See Specification.)

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

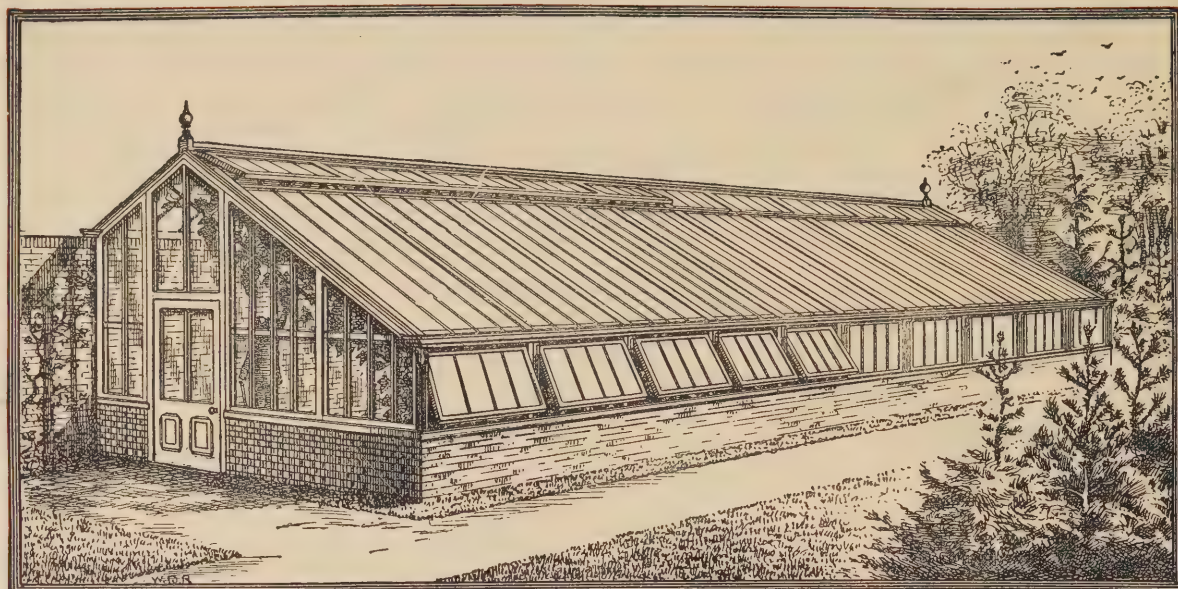


Fig. 41.

## HALF-SPAN GREENHOUSE OR VINERY, &c.

About 50ft. long by 16ft. wide.

### Price List.

(For Specification, see page 7.)

Length of House.	Width, 8ft. Height of Back Wall, 6ft. 6in. Do. to Top of Ridge, 9ft. 2in.		Width, 10ft. Height of Back Wall, 7ft. 6in. Do. to Top of Ridge, 10ft. 1in.		Width, 12ft. Height of Back Wall, 8ft. 3in. Do. to Top of Ridge, 11ft.		Width, 14ft. Height of Back Wall, 9ft. Do. to Top of Ridge, 11ft. 11in.		Width, 16ft. Height of Back Wall, 9ft. 6in. Do. to Top of Ridge, 12ft. 10in.		Width, 18ft. Height of Back Wall, 10ft. 3in. Do. to Top of Ridge, 13ft. 9in.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
15 0	20	5 0	25	0 0	29	15 0	34	10 0	39	5 0	44	0 0
20 0	25	15 0	30	0 0	35	5 0	40	15 0	46	0 0	51	5 0
25 0	29	10 0	35	0 0	40	15 0	46	15 0	52	15 0	58	15 0
30 0	34	0 0	40	0 0	46	10 0	53	0 0	59	10 0	66	0 0
35 0	38	5 0	45	0 0	52	0 0	59	0 0	66	5 0	73	5 0
40 0	40	15 0	49	15 0	57	10 0	65	5 0	73	0 0	80	10 0
50 0	51	10 0	59	15 0	68	15 0	77	10 0	86	5 0	95	0 0
60 0	60	5 0	69	15 0	79	15 0	89	15 0	99	15 0	109	15 0
70 0	69	0 0	79	15 0	91	0 0	102	0 0	113	5 0	124	5 0
80 0	77	15 0	89	15 0	102	0 0	114	5 0	126	15 0	138	15 0
90 0	86	10 0	99	10 0	113	5 0	126	10 0	140	0 0	153	10 0
100 0	95	0 0	109	10 0	124	5 0	138	15 0	153	10 0	168	0 0
Partitions,* each	4	10 0	5	10 0	6	10 0	7	10 0	8	10 0	9	10 0

Height of Front, 5ft. 6in. (2ft. 6in. Brickwork).

Lengths and Widths are measured outside of the wood uprights in front and end framing.

Top Ventilators in alternate bays only of houses 10ft. wide and under; and in *all* bays of wider houses.

Bottom Ventilators in alternate bays only of houses 10ft. wide and under; and in *all* bays of wider houses.

\* The Price of each partition includes a Door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted (see Specification).

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



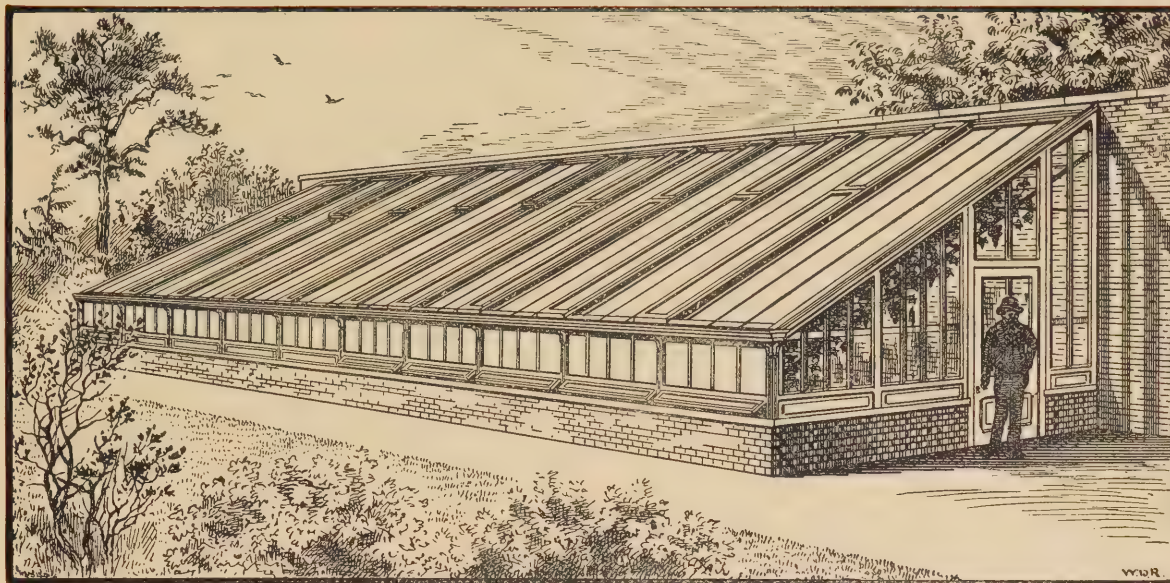


Fig. 42.

## LEAN-TO GREENHOUSE, VINERY, OR PEACH HOUSE, &c.

About 50ft. long, by 16ft. wide.

With Richardson's Patent System of Ventilation.

### Price List.

(For complete Description, see page 6. For Specification, see page 7.)

Length of House.	Width, 8ft. Height of Back, 9ft. 4in.	Width, 10ft. Height of Back, 10ft. 4in.	Width, 12ft. Height of Back, 11ft. 4in.	Width, 14ft. Height of Back, 12ft. 4in.	Width, 16ft. Height of Back, 13ft. 4in.	Width, 18ft. Height of Back, 14ft. 4in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	22 0 0	27 0 0	32 0 0	37 0 0	42 0 0	47 0 0
20 0	27 0 0	32 10 0	38 0 0	43 10 0	49 5 0	54 15 0
25 0	32 0 0	38 5 0	44 5 0	50 5 0	56 10 0	62 15 0
30 0	37 0 0	43 15 0	50 5 0	57 0 0	63 15 0	70 10 0
35 0	42 0 0	49 5 0	56 10 0	63 10 0	71 0 0	78 5 0
40 0	47 0 0	54 15 0	62 10 0	70 5 0	78 5 0	86 0 0
50 0	57 0 0	66 0 0	74 15 0	83 10 0	92 15 0	101 15 0
60 0	67 0 0	77 0 0	87 0 0	96 15 0	107 0 0	117 10 0
70 0	77 0 0	88 5 0	99 5 0	110 0 0	121 10 0	133 0 0
80 0	87 0 0	99 5 0	111 10 0	123 10 0	136 0 0	148 15 0
90 0	97 0 0	110 10 0	123 15 0	136 15 0	150 10 0	164 5 0
100 0	107 0 0	121 10 0	136 0 0	150 0 0	165 0 0	180 0 0
Partitions * each	4 10 0	5 15 0	6 15 0	7 15 0	8 10 0	9 5 0

Height of Front, 5ft. 3in. (1ft. 9in. Brickwork.)

Lengths and Widths are measured outside of wood uprights in front and end framing.

Complete simultaneous Ventilator Gearing in 2 sets, (1 set to the roof, and one set to the front,) is included in the Price List, but when the Roof Ventilators are divided into two lengths, as shewn above, the cost is slightly increased.

\* The Price of each Partition includes a Door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (See Specification.)

T RMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

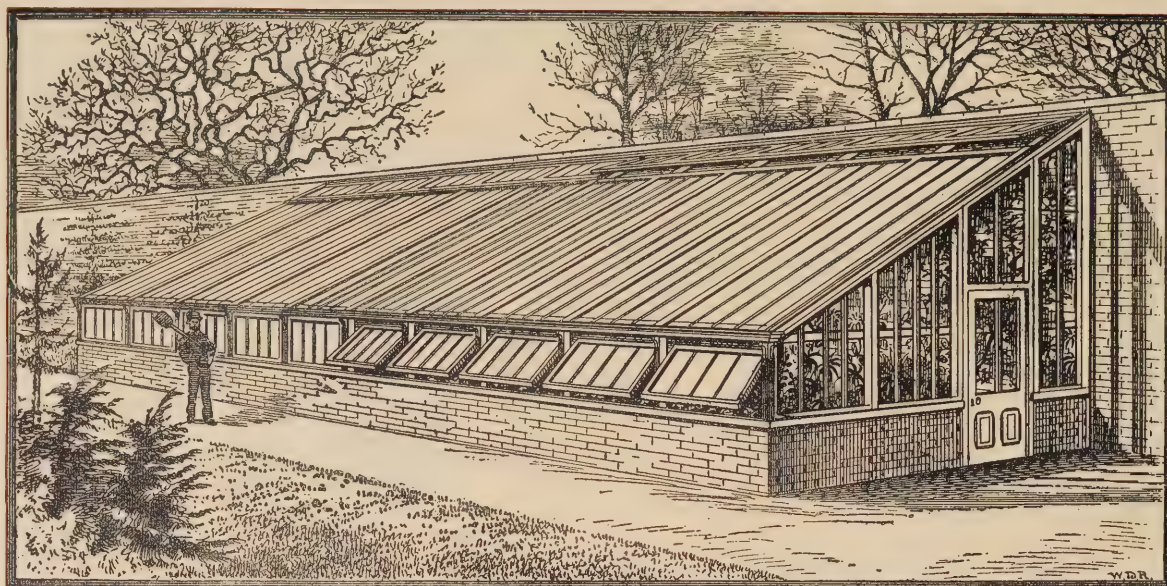


Fig. 43.

## LEAN-TO GREENHOUSE, ORCHID HOUSE, VINERY OR PEACH-HOUSE, &c.

About 50ft. long, by 16ft. wide.

### Price List.

(For Specification see page 7.)

Length of House.	Width, 8ft. Height of Back, 9ft. 6in.	Width, 10ft. Height of Back, 10ft. 6in.	Width, 12ft. Height of Back, 11ft. 6in.	Width, 14ft. Height of Back, 12ft. 6in.	Width, 16ft. Height of Back, 13ft. 6in.	Width, 18ft. Height of Back, 14ft. 6in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	18 0 0	22 5 0	26 10 0	31 0 0	35 10 0	39 15 0
20 0	21 15 0	26 10 0	31 5 0	36 10 0	41 10 0	46 5 0
25 0	25 15 0	30 15 0	36 5 0	41 15 0	47 10 0	52 15 0
30 0	29 10 0	35 0 0	41 0 0	47 0 0	53 5 0	59 0 0
35 0	33 5 0	39 5 0	45 15 0	52 10 0	59 0 0	65 10 0
40 0	36 15 0	43 10 0	50 15 0	57 15 0	65 0 0	72 0 0
50 0	44 0 0	52 5 0	60 5 0	68 10 0	76 15 0	84 15 0
60 0	51 10 0	60 15 0	70 0 0	79 5 0	88 10 0	97 10 0
70 0	59 0 0	69 5 0	79 10 0	90 0 0	100 5 0	110 10 0
80 0	66 10 0	77 15 0	89 5 0	100 10 0	112 0 0	123 5 0
90 0	74 0 0	86 5 0	99 0 0	111 10 0	123 15 0	136 5 0
100 0	81 0 0	94 15 0	108 10 0	122 0 0	135 10 0	149 0 0
Partitions,* each	4 10 0	5 10 0	6 10 0	7 5 0	8 0 0	8 15 0

Height of Front, 5ft. 6in. (2ft. 6in. Brickwork).

Lengths and widths are measured outside of the wood uprights in front and end framing.

Top Ventilators in alternate bays only of houses 10ft. wide and under; and in *all* bays of wider houses.

Bottom Ventilators in alternate bays only of houses 10ft. wide and under; and in *all* bays of wider houses.

\* The Price of each Partition includes a Door, with brass mortice latch &c., complete.

Carriage Paid and Fixed, Glazed and Painted, (see Specification.)

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



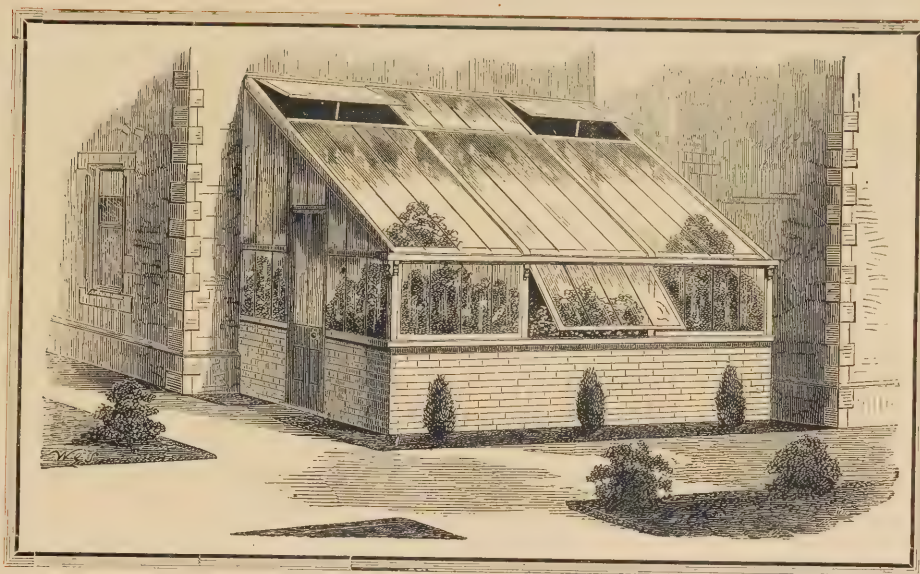


Fig. 44.

### LEAN-TO GREENHOUSE.

About 15ft. long by 10ft. wide.

*Prices same as for Fig. 43.*

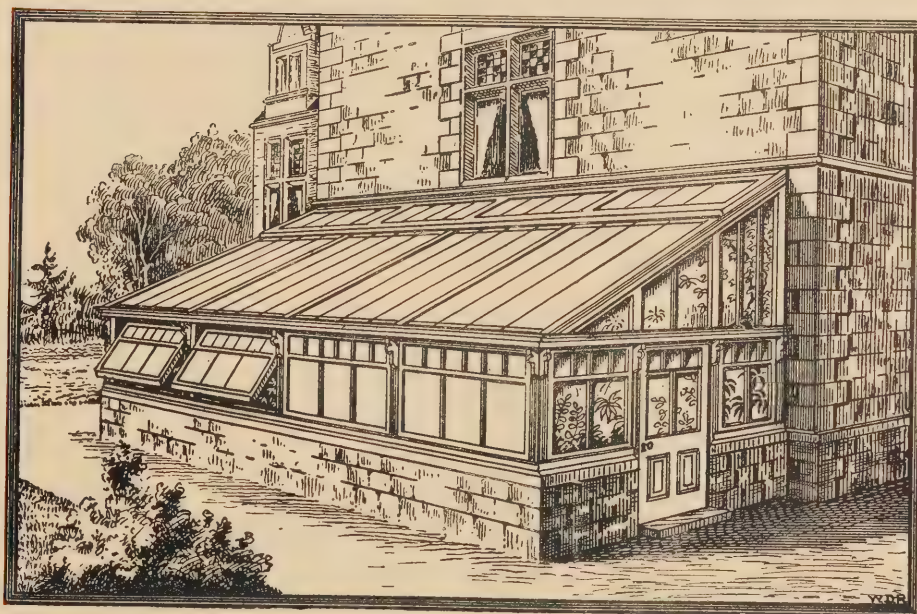


Fig. 45.

### LEAN-TO GREENHOUSE.

About 20ft. long by 10ft. wide.

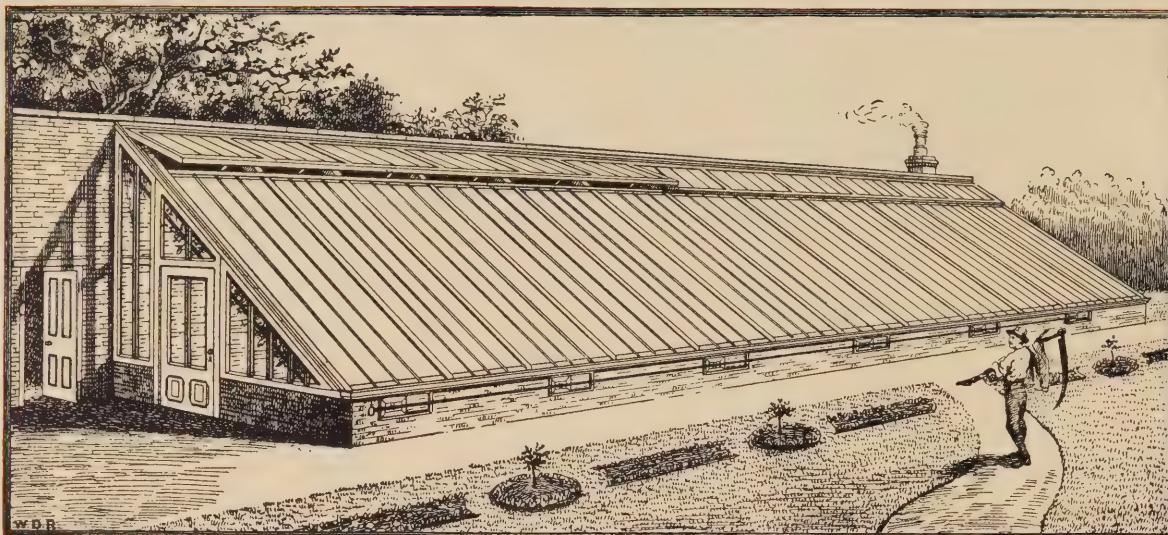


Fig. 46.

## LEAN-TO VINERY OR PEACH HOUSE.

About 60ft. long by 14ft. wide.

### Price List.

*For Specification see page 7.*

Length of House.	Width 8ft. Height of back 9ft.	Width 10ft. Height of back 10ft.	Width 12ft. Height of back 11ft.	Width 14ft. Height of back 12ft.	Width 16ft. Height of back 13ft.	Width 18ft. Height of back 14ft.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	13 0 0	16 5 0	19 10 0	23 0 0	26 5 0	29 10 0
20 0	15 10 0	19 5 0	23 0 0	26 15 0	30 10 0	34 5 0
25 0	18 5 0	22 5 0	26 5 0	30 15 0	34 15 0	39 0 0
30 0	20 15 0	25 5 0	29 15 0	34 10 0	39 0 0	43 15 0
35 0	23 5 0	28 5 0	33 5 0	38 10 0	43 10 0	48 10 0
40 0	26 0 0	31 5 0	36 15 0	42 5 0	47 15 0	53 5 0
50 0	31 0 0	37 5 0	43 15 0	50 0 0	56 5 0	62 10 0
60 0	36 5 0	43 5 0	50 10 0	57 15 0	65 0 0	72 0 0
70 0	41 5 0	49 5 0	57 10 0	65 10 0	73 10 0	81 10 0
80 0	46 10 0	55 5 0	64 5 0	73 10 0	82 0 0	91 0 0
90 0	51 10 0	61 5 0	71 5 0	81 5 0	90 15 0	100 5 0
100 0	56 15 0	67 5 0	78 0 0	88 10 0	99 5 0	109 15 0
Partitions * each	3 15 0	4 10 0	5 5 0	6 0 0	6 15 0	7 10 0

Height of Front, 2ft. 9in. (2ft. 6in. Brickwork.)

Lengths and Widths are measured outside of front and end walls, and inside of back ditto.

Top Ventilators in alternate bays only in houses 10ft. wide and under; and in *all* bays of wider houses.

Iron or Wood Sliding Ventilators for front wall supplied at an extra charge of 2/6 to 5/- each. When required ironwork for simultaneously opening and closing these Ventilators is supplied at approximately 9d. per foot run, but is specially quoted for in each case.

\* The price of each partition includes a door with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (*See Specification.*)

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



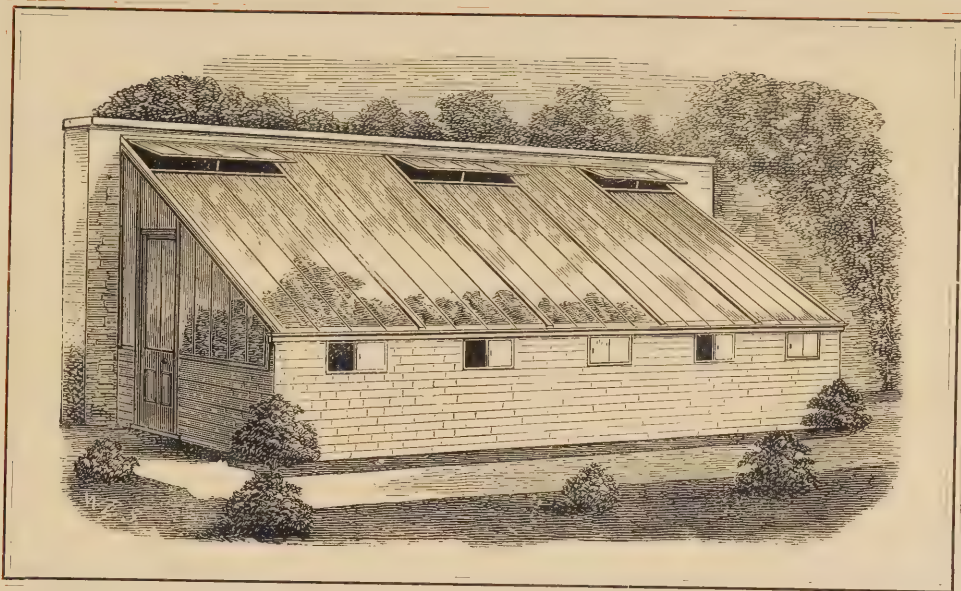


Fig. 47.

## LEAN-TO CUCUMBER HOUSE, FORCING HOUSE, OR PINE STOVE.

About 25ft. long by 9ft. wide.

### Price List.

*For Specification see page 7.*

Length of House.	Width 7ft. Height of back 7ft 9in	Width 8ft. Height of back 8ft 3in	Width 9ft. Height of back 8ft 9in	Width 10ft. Height of back 9ft 3in	Width 11ft. Height of back 9ft 9in	Width 12ft. Height of back 10ft 3in
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	10 15 0	12 5 0	14 0 0	15 10 0	17 5 0	19 0 0
20 0	12 15 0	14 10 0	16 10 0	18 5 0	20 5 0	22 0 0
25 0	15 0 0	17 0 0	19 5 0	21 5 0	23 10 0	25 10 0
30 0	17 0 0	19 5 0	21 15 0	24 0 0	26 5 0	28 10 0
35 0	19 0 0	21 10 0	24 5 0	26 15 0	29 5 0	31 15 0
40 0	21 5 0	24 0 0	26 15 0	29 10 0	32 5 0	35 0 0
50 0	25 5 0	28 10 0	31 15 0	35 0 0	38 5 0	41 10 0
60 0	29 15 0	33 5 0	37 0 0	40 10 0	44 5 0	48 0 0
70 0	33 15 0	37 15 0	42 0 0	46 0 0	50 5 0	54 5 0
80 0	38 0 0	42 10 0	47 0 0	51 10 0	56 0 0	60 15 0
90 0	42 5 0	47 5 0	52 5 0	57 5 0	62 5 0	67 5 0
100 0	46 10 0	51 15 0	57 5 0	62 15 0	68 0 0	73 10 0
Partitions * each	3 5 0	3 15 0	4 0 0	4 10 0	4 15 0	5 5 0

Height of Front, 4ft. (3ft. 9in. of Front and 2ft. 10½in. of Ends Brickwork.)

Lengths and Widths are measured outside of Front and End, and inside of back wall.

Top Ventilators in alternate bays as shewn.

Wood or Iron Sliding Ventilators for front wall supplied at an extra cost of 2/6 to 5/- each.

\* The price of each partition includes a door with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (*See Specification.*)

TERMS:—NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

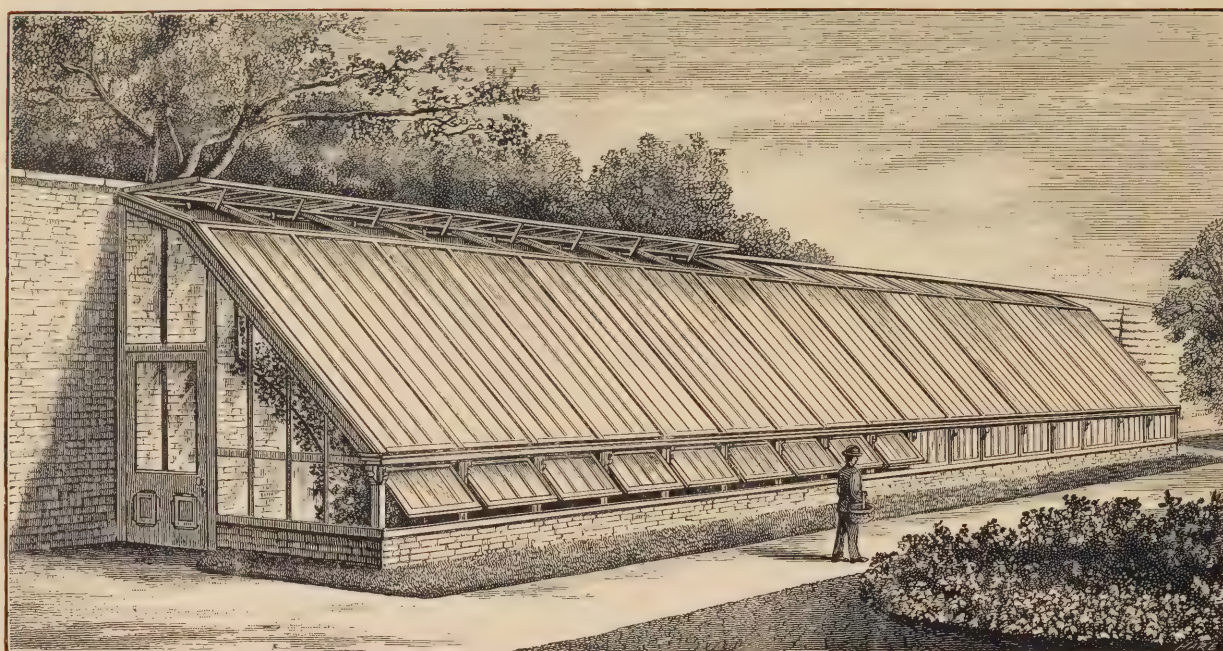


Fig. 48.

## RANGE OF LEAN-TO PEACH HOUSES,

About 80ft. long, by 8ft. wide,

As erected for Sir James Kitson, Bart., Gledhow Hall, Leeds, and many others.

### Price List.

(For Specification, see page 7.)

Length of House.	Width, 6ft. 6in. Height of Back 9ft. 0in.	Width, 7ft. Height of Back, 9ft. 6in.	Width, 7ft. 6in. Height of Back, 10ft. 6in.	Width, 8ft. Height of Back, 11ft. 3in.	Width, 8ft. 6in. Height of Back, 12ft. 0in.	Width, 9ft. 6in. Height of Back, 12ft. 6in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30 0	29 0 0	31 10 0	34 0 0	36 10 0	39 0 0	41 10 0
40 0	36 0 0	38 15 0	41 15 0	44 10 0	47 10 0	50 5 0
50 0	43 0 0	46 5 0	49 10 0	52 10 0	55 15 0	59 0 0
60 0	50 0 0	53 10 0	57 0 0	60 15 0	64 5 0	67 15 0
70 0	57 0 0	61 0 0	64 15 0	68 15 0	72 15 0	76 10 0
80 0	64 0 0	68 5 0	72 10 0	76 15 0	81 0 0	85 5 0
90 0	71 0 0	75 15 0	80 5 0	84 15 0	89 10 0	94 0 0
100 0	78 0 0	83 0 0	88 0 0	93 0 0	98 0 0	102 15 0
125 0	95 10 0	101 5 0	107 5 0	113 0 0	119 0 0	124 15 0
150 0	113 0 0	119 15 0	126 10 0	133 5 0	140 0 0	146 15 0
175 0	130 10 0	138 5 0	145 15 0	153 5 0	161 0 0	168 10 0
200 0	148 0 0	156 10 0	165 0 0	173 10 0	182 0 0	190 10 0
Partitions* each	4 0 0	4 10 0	4 15 0	5 5 0	5 10 0	6 0 0

Height of Front, 3ft. 6in. (1ft. Brickwork.)

Lengths and Widths are measured outside of wood uprights in front and end framing.

For simultaneous Iron Gearing to Ventilators, *see Specification.*

\* The Price of each Partition includes a Door, with brass mortice latch, &c., complete.

Carriage Paid and Fixed, Glazed and Painted. (*See Specification.*)

TERMS : NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



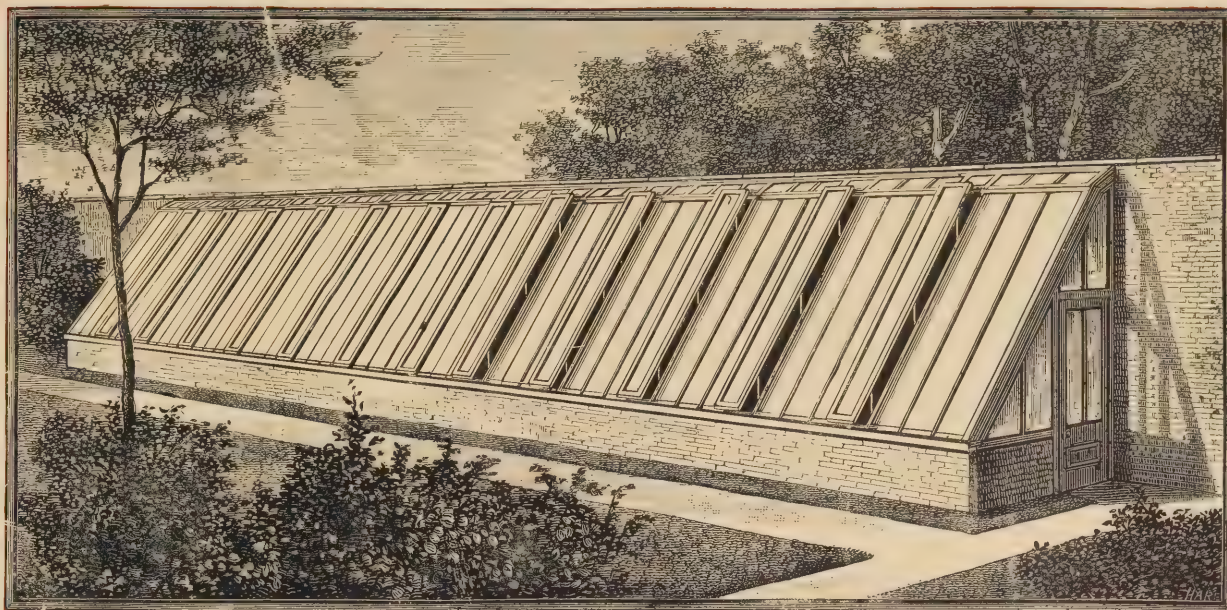


Fig. 49.

## WALL COVER OR PEACH HOUSE,

About 60ft. long, by 6ft. 6in. wide,

With **Richardson's Patent** System of Ventilation.

Erected for Chas. H. Wilson, Esq., M.P., Warter Priory, and many others.

### Price List.

*For Description of Ventilation, see page 6. For Specification, see page 7.*

Length of House.	Height of back, 8ft. Outside Width, 5ft. 6in.	Height of back, 9ft. Outside Width, 6ft. 0in.	Height of back, 10ft. Outside Width, 6ft. 3in.	Height of back, 11ft. Outside Width, 6ft. 6in.	Height of back, 12ft. Outside Width, 7ft. 0in.	Height of back, 13ft. Outside Width, 7ft. 6in.
ft. in.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30 0	24 15 0	27 10 0	30 0 0	33 0 0	35 10 0	38 0 0
40 0	31 10 0	34 15 0	37 15 0	41 10 0	44 10 0	47 5 0
50 0	38 0 0	42 0 0	45 15 0	50 0 0	53 5 0	56 15 0
60 0	44 15 0	49 10 0	53 10 0	58 5 0	62 5 0	66 0 0
70 0	51 10 0	56 15 0	61 10 0	66 15 0	71 5 0	75 5 0
80 0	58 0 0	64 0 0	69 5 0	75 5 0	80 0 0	84 15 0
90 0	64 15 0	71 5 0	77 0 0	83 15 0	89 0 0	94 0 0
100 0	71 10 0	78 10 0	85 0 0	92 0 0	98 0 0	103 5 0
125 0	88 0 0	96 15 0	104 10 0	113 5 0	120 5 0	126 10 0
150 0	104 15 0	115 0 0	124 5 0	134 5 0	142 10 0	150 0 0
175 0	121 5 0	133 5 0	144 0 0	155 10 0	164 15 0	173 5 0
200 0	138 0 0	151 10 0	163 10 0	176 10 0	187 0 0	196 10 0
Partitions* each.	3 5 0	3 10 0	4 0 0	4 5 0	4 10 0	4 15 0

Height of Front Wall, 2ft.

Lengths and Widths are measured outside of front and end, and inside of back walls.

Complete simultaneous Ventilator Gearing is included. (*See Specification.*)

\* The Price of each Partition includes a Door, with brass mortice latch, &c., complete.

**Carriage Paid and Fixed, Glazed and Painted.** (*See Specification.*)

**TERMS : NET CASH.**

**HORTICULTURAL BUILDERS, & HEATING ENGINEERS.**

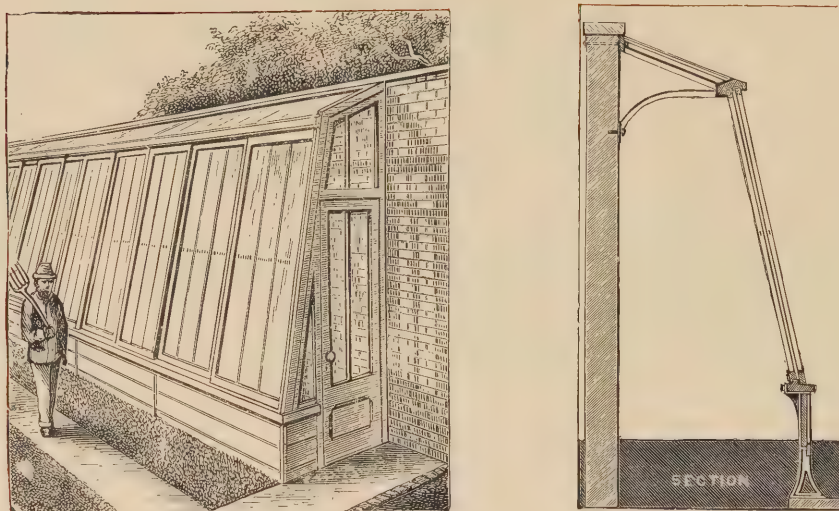


Fig. 50.

## THE "DARLINGTON" GLASS WALL COVER OR PEACH CASE,

The "Darlington" Wall Cover is believed to be *cheaper than anything of the kind that has ever before been offered to the public*, and at the same time it is thoroughly strong, well made and durable. It is Portable in the fullest sense of the word, the whole front (which is composed of sashes), and the ends and top glass being made so as *to lift entirely off* with the greatest ease and rapidity. They can be easily replaced, and every alternate light will then, if desired, slide (on runners) behind its neighbour, so as to give *thorough ventilation*. The front of the Wall Cover is usually fixed on a wall 18 inches high, but a portable front, with cast iron standards, as shewn in the above section, can be supplied at the extra cost named in the price list, no brickwork whatever being then required except the back wall. The Wall Covers are carefully put together at the works before being despatched, each part being numbered so that they can be fixed at their destination without the least difficulty. The Glass is of superior quality, 210z. weight per foot; it is cut to the requisite sizes, and sent carefully packed in boxes. It can be put in by any labourer in an incredibly short space of time, without the use of putty or of tools.

*For further information see General Specification, page 7.*



## THE "DARLINGTON" GLASS WALL COVER.

*Continued from previous page***Price Lists.****Delivered Carriage Paid.—NOT FIXED.**

Length.	No. of Lights.	Price of Houses for Brick Front Wall (latter 1ft. 6in. high,) in place of wood and iron under Sill.					Price of Houses with Wood Front 1ft. 6in. high, and Iron Standards extending 1ft. into ground, as in section. <i>(See previous page.)</i>				
		Back wall 8ft. high.	Back wall 9ft. high.	Back wall 10ft. high.	Back wall 11ft. high.	Back wall 12ft. high.	Back wall 8ft. high.	Back wall 9ft. high.	Back wall 10ft. high.	Back wall 11ft. high.	Back wall 12ft. high.
ft. in.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	4	11 10 0	12 6 0	13 2 6	13 18 6	14 15 0	13 15 0	14 11 0	15 7 6	16 3 6	17 0 0
22 6	6	15 5 0	16 6 6	17 8 6	18 10 6	19 12 6	18 5 0	19 6 6	20 8 6	21 10 6	22 12 6
30 0	8	19 0 0	20 7 6	21 15 0	23 2 6	24 10 0	22 15 0	24 2 6	25 10 0	26 17 6	28 5 0
37 6	10	22 15 0	24 8 0	26 1 0	27 14 0	29 7 6	27 5 0	28 18 0	30 11 0	32 4 0	33 17 6
45 0	12	26 10 0	28 8 6	30 7 6	32 6 0	34 5 0	31 15 0	33 13 6	35 12 6	37 11 0	39 10 0
52 6	14	30 5 0	32 9 0	34 13 6	36 18 0	39 2 6	36 5 0	38 9 0	40 13 6	42 18 0	45 2 6
60 0	16	34 0 0	36 10 0	39 0 0	41 10 0	44 0 0	40 15 0	43 5 0	45 15 0	48 5 0	50 15 0
75 0	20	41 10 0	44 11 0	47 12 6	50 13 6	53 15 0	49 15 0	52 16 0	55 17 6	58 18 6	62 0 0
90 0	24	49 0 0	52 12 6	56 5 0	59 17 6	63 10 0	58 15 0	62 7 6	66 0 0	69 12 6	73 5 0
105 0	28	56 10 0	60 13 6	64 17 6	69 1 0	73 5 0	67 15 0	71 18 6	76 2 6	80 6 0	84 10 0
120 0	32	64 0 0	68 15 0	73 10 0	78 5 0	83 0 0	76 15 0	81 10 0	86 5 0	91 0 0	95 15 0
135 0	36	71 10 0	76 16 0	82 2 6	87 8 6	92 15 0	85 15 0	91 1 0	96 7 6	101 13 6	107 0 0
150 0	40	79 0 0	84 17 6	90 15 0	96 12 6	102 10 0	94 15 0	100 12 6	106 10 0	112 7 6	118 5 0
165 0	44	86 10 0	92 18 6	99 7 6	105 16 0	112 5 0	103 15 0	110 3 6	116 12 6	123 1 0	129 10 0
180 0	48	94 0 0	101 0 0	108 0 0	115 0 0	122 0 0	112 15 0	119 15 0	126 15 0	133 15 0	140 15 0
195 0	52	101 10 0	109 1 0	116 12 6	124 3 6	131 15 0	121 15 0	129 6 0	136 17 6	144 8 6	152 0 0
210 0	56	109 0 0	117 2 6	125 5 0	133 7 6	141 10 0	130 15 0	138 17 6	147 0 0	155 2 6	163 5 0

**Delivered Carriage Paid—AND FIXED.**

Length.	No. of Lights.	Prices of Houses for Brick Front Wall (latter 1ft. 6in. high), in place of wood and iron under Sill.					Price of Houses with Wood Front 1ft. 6in. high, and Iron Standards extending 1ft. into ground, as in section. <i>(See previous page.)</i>				
		Back wall 8ft. high.	Back wall 9ft. high.	Back wall 10ft. high.	Back wall 11ft. high.	Back wall 12ft. high.	Back wall 8ft. high.	Back wall 9ft. high.	Back wall 10ft. high.	Back wall 11ft. high.	Back wall 12ft. high.
ft. in.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
15 0	4	13 5 0	14 0 0	14 17 6	15 12 6	16 10 0	16 2 6	16 17 6	17 15 0	18 10 0	19 7 6
22 6	6	17 7 6	18 10 0	19 10 0	20 12 6	21 15 0	21 5 0	22 5 0	23 7 6	24 10 6	25 10 0
30 0	8	21 10 0	22 17 6	24 5 0	25 12 6	27 0 0	26 5 0	27 12 6	29 0 0	30 7 6	31 15 0
37 6	10	25 12 6	27 5 0	28 17 6	30 12 6	32 5 0	31 5 0	32 17 6	34 12 6	36 5 0	37 17 6
45 0	12	29 15 0	31 15 0	33 12 6	35 10 0	37 10 0	36 7 6	38 5 0	40 5 0	42 2 6	44 2 6
52 6	14	33 17 6	36 5 0	38 5 0	40 10 0	42 15 0	41 10 0	43 12 6	45 17 6	48 2 6	50 5 0
60 0	16	38 0 0	40 10 0	43 0 0	45 10 0	48 0 0	46 10 0	49 0 0	51 10 0	54 0 0	56 10 0
75 0	20	46 5 0	49 5 0	52 7 6	55 7 6	58 10 0	56 12 6	59 12 6	62 15 0	65 15 0	68 17 6
90 0	24	54 10 0	58 2 6	61 15 0	65 7 6	69 0 0	66 15 0	70 7 6	74 0 0	77 12 6	81 5 0
105 0	28	62 15 0	67 0 0	71 2 6	75 5 0	79 10 0	76 17 6	81 0 0	85 5 0	89 7 6	93 12 6
120 0	32	71 0 0	75 15 0	80 10 0	85 5 0	90 0 0	87 0 0	91 15 0	96 10 0	101 5 0	106 0 0
135 0	36	79 5 0	84 10 0	89 17 6	95 2 6	100 10 0	97 2 6	102 10 0	107 15 0	113 0 0	118 7 6
150 0	40	87 10 0	93 7 6	99 5 0	105 2 6	111 0 0	107 5 0	113 2 6	119 0 0	124 17 6	130 15 0
165 0	44	95 15 0	102 5 0	108 12 6	115 0 0	121 10 0	117 7 6	123 15 0	130 5 0	136 12 6	143 2 6
180 0	48	104 0 0	111 0 0	118 0 0	125 0 0	132 0 0	127 10 0	134 10 0	141 10 0	148 10 0	155 10 0
195 0	52	112 5 0	119 15 0	127 7 6	134 17 6	142 10 0	137 12 6	145 2 6	152 15 0	160 5 0	167 17 6
210 0	56	120 10 0	128 12 6	136 15 0	144 17 6	153 0 0	147 15 0	155 17 6	164 0 0	172 2 6	180 5 0

Outside Width of all sizes, 4ft. 6in.

2 Ends and 1 Door with rim lock included in each price.

If 2 Doors are required (1 in each end) an extra charge of £1 will be made.

Bricklayer's Work, and Cutting Bolt Holes through back walls, not included.

The Thickness of Back Walls (for length of bolts) is required with each order.

Any materials found necessary for packing are charged at cost price.

All Empty Glass Cases must be returned to the makers, carriage paid, within two weeks or will be charged for.

**TERMS : NET CASH.****HORTICULTURAL BUILDERS, & HEATING ENGINEERS.**

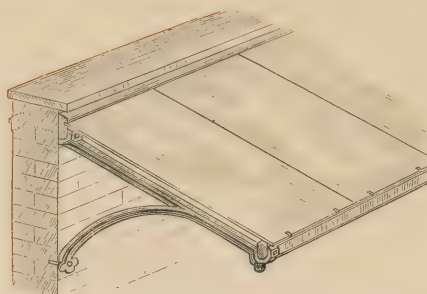


Fig. 51.

## RICHARDSON'S PORTABLE GLASS WALL-TREE PROTECTOR.

This WALL-TREE PROTECTOR OR COPING, although a marvel of cheapness, is manufactured of the best material, and is strong and well finished. It consists of a plate or ridge piece at the top, and a rail or bearer at the bottom, made of the best red deal, supported on cast iron brackets fixed about 10 feet apart, and glazed with  $\frac{1}{8}$ -inch patent rolled plate-glass. The woodwork is painted 3 coats, and the iron brackets are painted 2 coats, and all necessary bolts, etc., are supplied.

The fixing, which is not included in the price herein quoted, is easily and quickly done by an ordinary carpenter, to the directions given below.

It is usually desirable to remove the Coping for the summer and autumn, and this can be done (leaving the brackets fixed) in a remarkably short space of time, about half-an-hour being sufficient for taking down or putting up a length of 100 feet by one man and a boy.

In ordering the Coping, it is necessary to name the thickness of the wall to which it is intended to be fixed.

### Prices.

2 feet wide, 1s. 10d. per running foot (100 feet only £9 3s. 4d.)

3     „     2s. 6d.     „     (100     „     £12 10s. 0d.)

Including 1 bracket to every 10 feet. Extra brackets, with fittings, 4s 6d. and 5s. 9d. each. An iron rod under the front rail, with rings and hooks for sliding curtains, can be supplied for 4d. per foot extra.

Carriage Paid to any Railway Station for orders amounting to £5 and upwards.

TERMS: NET CASH.

### DIRECTIONS FOR FIXING.

Drill a hole through the wall for the  $\frac{1}{2}$ -inch iron bolt at the top of each iron bracket 10 feet apart, or thereabouts, and exactly  $2\frac{1}{2}$  inches below the intended top line of the Coping, measuring to the centre of the hole; then fix the wood top plate on the wall with the strong nails sent (and the necessary wood plugs), two nails between each pair of brackets, the exact position of the plate being determined by the said bolts, each of which must be passed through the hole made for it in the top of the bracket and through the wood plate, thus fixing both at the same time, and the bolt being secured by a nut and a washer at the back of the wall. The lower ends of the brackets are to be made fast with the driving studs sent for the purpose. The front rails or bearers are next to be joined together in long lengths by the scarfs and bolts provided, and to be dropped into the sockets at the front ends of the iron brackets, the set-screw in each of the latter tightened, and one of the intermediate iron stays fixed between each pair of brackets. The sheets of glass are now to be laid in, the upper end of each sheet being inserted in the groove for the purpose in the wood top plate, and the lower end dropped into the galvanized iron clips on the bottom rail, which will secure it without any screw or button or other troublesome appliance.

All empty cases must be returned to the makers, Carriage Paid, not later than two weeks after their arrival, or they will be charged for



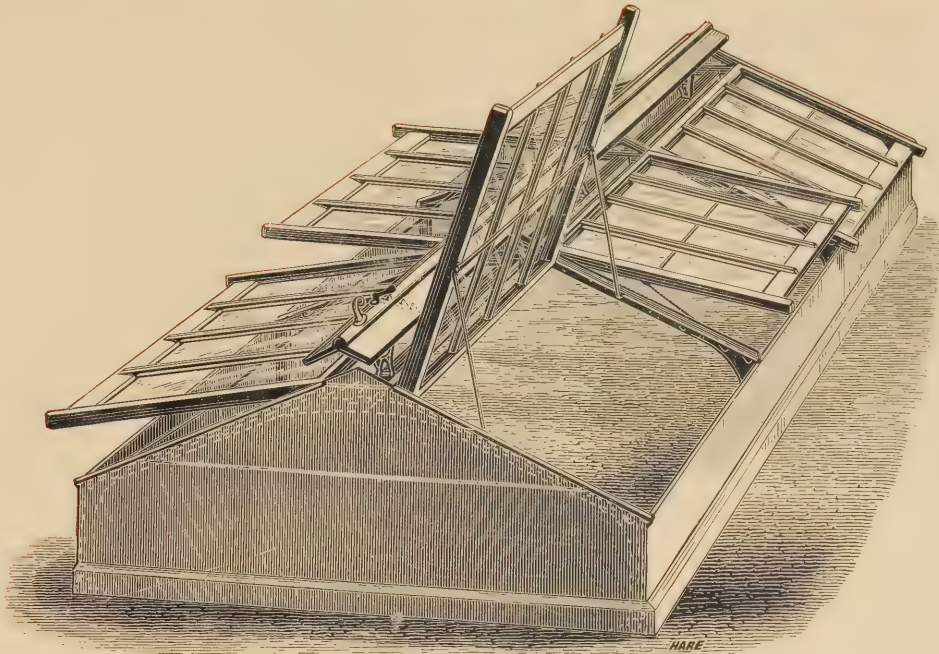


Fig. 52.

## RICHARDSON'S IMPROVED "RIDGE LIFT" PLANT FRAMES.

### Price List.

LENGTH.	PORTABLE AS SHOWN BY ILLUSTRATION.				ADAPTED FOR BRICK WALLS HAVING WOOD PLATES INSTEAD OF BOARDED SIDES & ENDS.				
	"SPAN-ROOFED."				"SPAN-ROOFED."				
	6 ft. wide.		8 ft. wide.		6 ft. wide.		8 ft. wide.		
	£	s.	d.	£	s.	d.	£	s.	d.
8ft.	6	5	0	8	0	0	5	0	0
12ft.	8	2	6	10	10	0	7	0	0
16ft.	10	0	0	13	0	0	9	0	0
20ft.	12	0	0	15	10	0	11	0	0
24ft.	14	2	6	18	2	6	13	0	0
28ft.	16	5	0	20	15	0	15	0	0
32ft.	18	7	6	23	7	6	17	0	0
36ft.	20	10	0	26	0	0	19	0	0
40ft.	22	10	0	28	10	0	21	0	0

IF MADE WITHOUT RIDGE VENTILATION 1/6 PER RUNNING FOOT LESS.

It will at once be seen that these Frames are a great improvement on the ordinary kind. The ribs are of cast iron. The various parts are securely put together with bolts, and are easily taken to pieces for removal. *Top Ventilation* for use in severe weather is obtained by a lifting ridge cap, instantly opened and regulated to any height desired. The lights have wrought iron stays for securing them open at any angle, without in the least interfering with the plants inside; these lights can be removed when required. The frames, as illustrated, have sides and ends of wood, but they are also made with plates (as named in the 2nd list above) for fixing on brick walls. They are painted three coats of best genuine white lead paint—stone colour—and glazed with 21oz. Sheet Glass of superior quality. Packing materials are charged at cost price.

Carriage paid to any Railway Station in Great Britain.

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

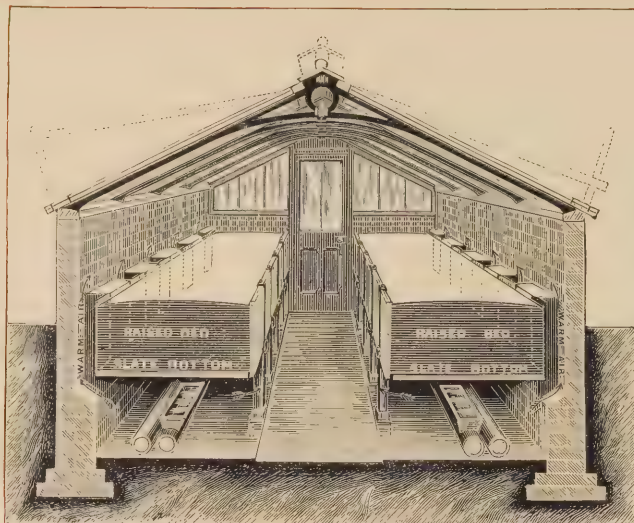


Fig. 53. SPAN-ROOFED FORCING HOUSE.

The Roof of the above has cast iron ribs, and is made on our improved principle, generally similar to Fig. 52 (see previous page), but adapted for brick walls, and is wide enough to allow of a footpath along the centre, thus forming with the glass ends and door a very useful Forcing House at a small cost. The Glass is cut to the required sizes and sent separately, securely packed.

If 2 doors are required, the extra price including good rim lock, &c., complete, will be £1.

The raised beds shewn in illustration (not included in above price list) are made in a special manner. The front and bottom being of sawn slate slabs, supported by cast iron standards and wrought iron bearers. They are easily removable, neat in appearance, and very substantial in construction. A recessed opening should be formed in the brick wall at back, at about every 4 feet, covered with a piece of slate, which forms a convenient flue for the warm air from pipes to ascend close to outer walls, and the front near footpath being entirely open, no separate "top heat" is required. Special quotations for these raised beds will be given on application with full particulars.

PRICE, including two glass ends with one door.

10 feet wide only.

LENGTH.	PRICE.
	£ s. d.
12 feet	14 0 0
16 "	17 0 0
20 "	20 0 0
24 "	23 0 0
28 "	26 0 0
32 "	29 0 0
36 "	32 0 0
40 "	35 0 0

Heights, Door 6 ft. Top of Ridge, 7 ft. 6 in.

Brick ends, 3 ft. 5 in. Brick sides, 4 ft. 6 in. (from floor level)

Carriage paid to any Railway Station in Great Britain.

Packing materials charged at cost price.

Terms : Net Cash.

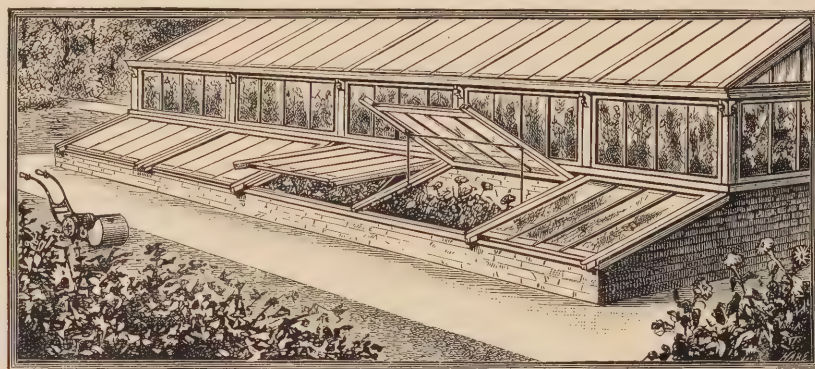


Fig. 54.

### IMPROVED LEAN-TO PLANT PITS.

The above are constructed on our improved system, so that the lights can be easily fixed wide open, or at any angle, without in the least interfering with the plants inside, and they (the lights) can be lifted entirely off when required. The prices include strong wood wall plates and rafters of proper construction; the lights are glazed with 21 oz. sheet glass of very superior quality, each pane being bedded in putty and secured with zinc glazing points. The woodwork is of the best Baltic red deal, properly seasoned, and painted 3 coats of genuine white lead paint.

#### Price List.

	LENGTH.	4 FT. WIDE *		LENGTH.	4 FT. WIDE *
		£ s. d.			£ s. d.
2 Lights & Framing	8 ft.	3 0 0	9 Lights & Framing	36 ft.	11 15 0
3 " "	12 ft.	4 5 0	10 " "	40 ft.	13 0 0
4 " "	16 ft.	5 10 0	11 " "	44 ft.	14 5 0
5 " "	20 ft.	6 15 0	12 " "	48 ft.	15 10 0
6 " "	24 ft.	8 0 0	13 " "	52 ft.	16 15 0
7 " "	28 ft.	9 5 0	14 " "	56 ft.	18 0 0
8 " "	32 ft.	10 10 0	15 " "	60 ft.	19 5 0

Carriage Paid to any Railway Station in Great Britain. Packing materials charged at Cost Price.

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



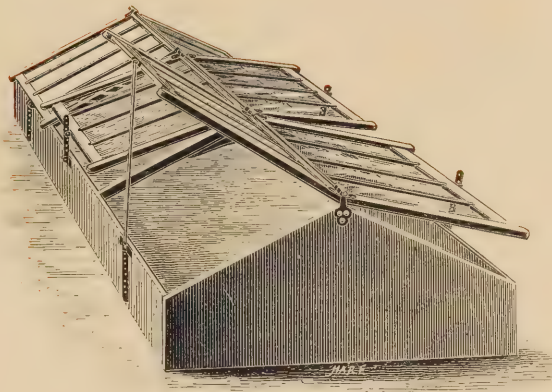


Fig. 55.

### SPAN-ROOFED GARDEN FRAMES.

These Frames are 14 inches high at the sides, and 27 inches, 30 inches, and 33 inches high respectively at the ridge; lights 4 ft. wide. They are thoroughly strong and easily put together. Each light has a regulating stay bar for ventilation, and can when required be propped wide open as shown, for easy access to the plants, at the same time being perfectly secured from blowing over. All the lights will fold back on to the other side; they are glazed with 21 oz. sheet glass of superior quality, and are painted 3 coats of genuine white lead paint (stone colour unless ordered to the contrary).

### Price List.

CARRIAGE PAID TO ANY RAILWAY STATION IN GREAT BRITAIN.

Length.	Portable as shown above.			With wood plates for walls instead of boarded sides and ends.		
	5 Ft. Wide	6 Ft. Wide	7 Ft. Wide	5 Ft. Wide	6 Ft. Wide	7 Ft. Wide
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
8 ft.	3 17 6	4 5 0	4 15 0	3 12 6	4 0 0	4 10 0
12 ft.	5 7 6	5 17 6	6 10 0	5 2 6	5 12 6	6 5 0
16 ft.	6 17 6	7 10 0	8 5 0	6 12 6	7 5 0	8 0 0
20 ft.	8 7 6	9 2 6	10 0 0	8 2 6	8 17 6	9 15 0
24 ft.	9 17 6	10 15 0	11 15 0	9 10 0	10 7 6	11 7 6
28 ft.	11 7 6	12 7 6	13 10 0	11 0 0	12 0 0	13 2 6
32 ft.	12 17 6	14 0 0	15 5 0	12 10 0	13 12 6	14 17 6
36 ft.	14 7 6	15 12 6	17 0 0	14 0 0	15 5 0	16 12 6

Packing Materials charged at Cost Price.

TERMS: NET CASH.

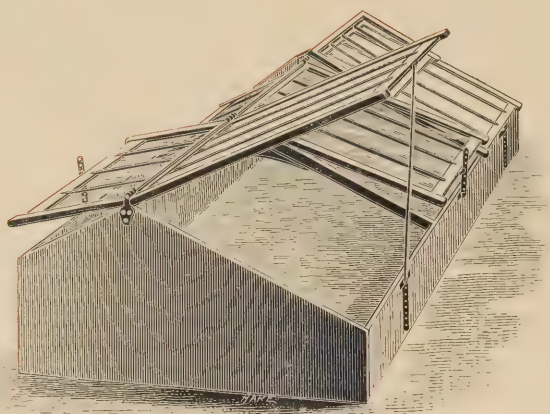


Fig. 56.

### HALF-SPAN-ROOFED GARDEN FRAMES.

Front 14 inches high, Back 24 inches., and Ridge 32in., 35in., and 38in. high respectively; lights 4 ft. wide. They are thoroughly strong and easily put together. Each light has a regulating stay bar for ventilation, and can, when required, be propped wide open as shown, for easy access to the plants, at the same time being perfectly secured from blowing over. All the lights will fold back on to the other side; they are glazed with 21 oz. sheet glass of superior quality, and are painted 3 coats of genuine white lead paint (stone colour unless ordered to the contrary).

### Price List.

CARRIAGE PAID TO ANY RAILWAY STATION IN GREAT BRITAIN.

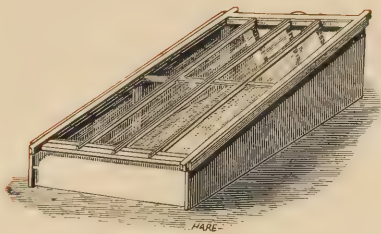
Length.	Portable as shown above.			With wood plates for Brick Walls instead of boarded sides and ends.		
	5 Ft. Wide	6 Ft. Wide	7 Ft. Wide	5 Ft. Wide	6 Ft. Wide	7 Ft. Wide
8 ft.	£ s. d. 4 0 0	£ s. d. 4 9 0	£ s. d. 5 0 0	£ s. d. 3 12 6	£ s. d. 4 0 0	£ s. d. 4 10 0
12 ft.	5 12 0	6 3 6	6 17 6	5 2 6	5 12 6	6 5 0
16 ft.	7 3 6	7 18 0	8 15 0	6 12 6	7 5 0	8 0 0
20 ft.	8 15 0	9 12 6	10 12 6	8 2 6	8 17 6	9 15 0
24 ft.	10 6 6	11 7 0	12 10 0	9 10 0	10 7 6	11 7 6
28 ft.	11 18 0	13 1 6	14 7 6	11 0 0	12 0 0	13 2 6
32 ft.	13 10 0	14 16 0	16 5 0	12 10 0	13 12 6	14 17 6
36 ft.	15 0 0	16 10 0	18 2 6	14 0 0	15 5 0	16 12 6

Packing Materials charged at cost price.

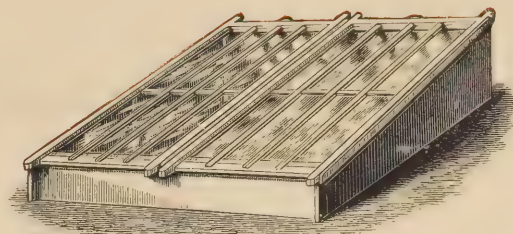
TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

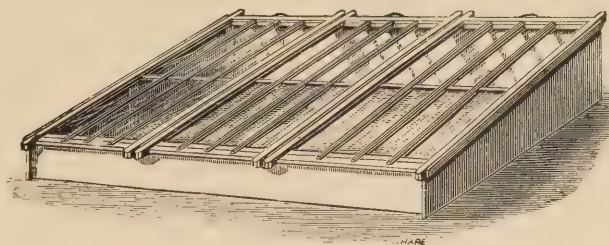




SINGLE LIGHT AND FRAME.



TWO LIGHTS AND FRAME.



THREE LIGHTS AND FRAME.

Fig. 57.

## GARDEN FRAMES WITH SLIDING LIGHTS.

Height at Back, 24 inches, and at Front, 14 inches. Sides,  $1\frac{1}{4}$  inches thick.

The Lights, which are 2 inches thick are made of the best Baltic red deal, strengthened with iron cross bars, fitted with handles, and glazed with 21 oz. sheet glass of superior quality, each pane being bedded in putty and secured with our improved zinc glazing points. The sides and ends are portable—made to slide together. The woodwork is painted 3 coats of best genuine white lead paint, stone colour.

### Price List.

	LENGTH.	WIDTH *	£	s.	d.
Single Light and Frame...	4 ft.	6 ft.	1	18	0
2 Lights " " ...	8 ft.	6 ft.	3	5	0
3 Lights " " ...	12 ft.	6 ft.	4	10	0

\* The width given is the exact length of the Light.

Lights only, 6ft. by 3ft.  $10\frac{1}{2}$ in. (without handles). Price 16/- each.  
 Ditto do not glazed or painted " 6/- "

Carriage Paid to any Railway Station in Great Britain on orders amounting to 40/- and upwards.

Boards used for packing charged at cost price.

TERMS: NET CASH.

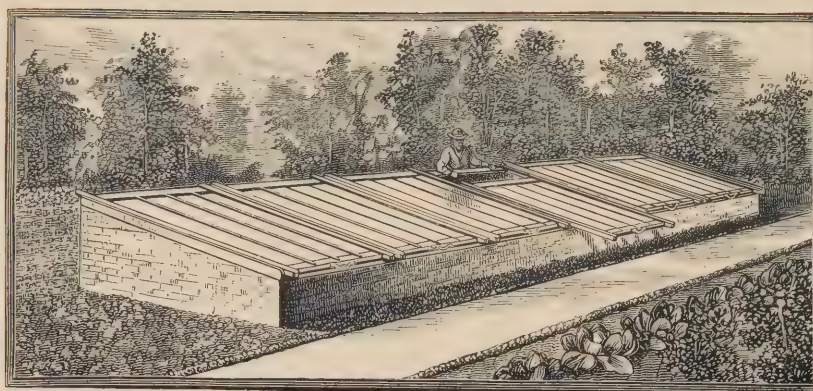


Fig. 58.

## FORCING PITS with SLIDING LIGHTS and FRAMING for WALLS.

Prices include wood plates and rafters made to screw together, and strong well finished lights 2 inches thick of the best Baltic red deal. Each light is strengthened with an iron cross bar, has an iron handle, and is glazed with 21 oz. sheet glass of very superior quality, each pane being bedded in putty and secured with zinc glazing points. The woodwork is painted 3 coats of best genuine white lead paint.

### Price List.

DELIVERED CARRIAGE PAID TO ANY RAILWAY STATION IN GREAT BRITAIN.

	Length	6 ft. Wide *	7 ft. 6 in. Wide *		Length	6 ft. Wide *	7 ft. 6 in. Wide *
		£ s. d.	£ s. d.			£ s. d.	£ s. d.
2 Lights & Framing	8 ft.	2 14 0	3 4 0	9 Lights & Framing	36 ft.	10 8 0	12 6 0
3 " "	12 ft.	3 16 0	4 10 0	10 " "	40 ft.	11 10 0	13 12 0
4 " "	16 ft.	4 18 0	5 16 0	11 " "	44 ft.	12 12 0	14 18 0
5 " "	20 ft.	6 0 0	7 2 0	12 " "	48 ft.	13 14 0	16 4 0
6 " "	24 ft.	7 2 0	8 8 0	13 " "	52 ft.	14 16 0	17 10 0
7 " "	28 ft.	8 4 0	9 14 0	14 " "	56 ft.	15 18 0	18 16 0
8 " "	32 ft.	9 6 0	11 0 0	15 " "	60 ft.	17 0 0	20 2 0

\* The width given is the exact length of the lights.

Carriage Paid to any Railway Station in Great Britain.

Boards used for Packing charged at cost price.

TERMS: NET CASH.



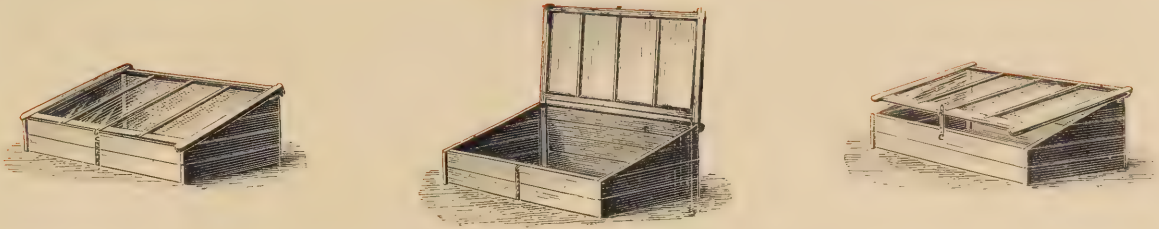


Fig. 59.

### THE "COTTAGE" PLANT FRAME.

Is thoroughly *strong* and *portable*. Low in price, but of the best materials. The Top Light has strong hinges of special construction; can be regulated for ventilation; secured wide open, or lifted off. It is glazed with superior quality 21 oz. sheet glass without putty. Any labourer can re-glaze. Painted 3 coats.

#### Prices.

No. 1 size, 4 ft. × 3 ft. 24/-. No. 2 size, 5 ft. × 3 ft. 3 in., 30/-.

Carriage paid if two or more are ordered. No charge for Packing Materials.

TERMS: NET CASH.

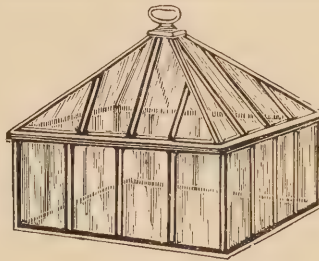


Fig. 60.

### SQUARE HAND GLASSES.

With loose Tops and Zinc Frames.

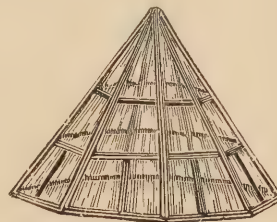
The above Hand Glasses are made of strong Corrugated Zinc, and the glass is secured with Zinc clips, no putty or solder being required.

The glass can be moved instantly from one Frame and fitted into another without damage, all the glass being interchangeable, and every Frame (of each size) alike.

Size	12	14	16	18	20	24	inch.
Price	6/-	7/6	9/6	11/6	13/6	21/6	each.

The five smaller sizes nest into the 24 inch, and pack securely into one crate, charged 2/-. The same crate is required for single ones.

20 Inch.  
3/- Each.



21 Inch.  
3/6 Each.

Fig. 61.

### CAP GLASSES.

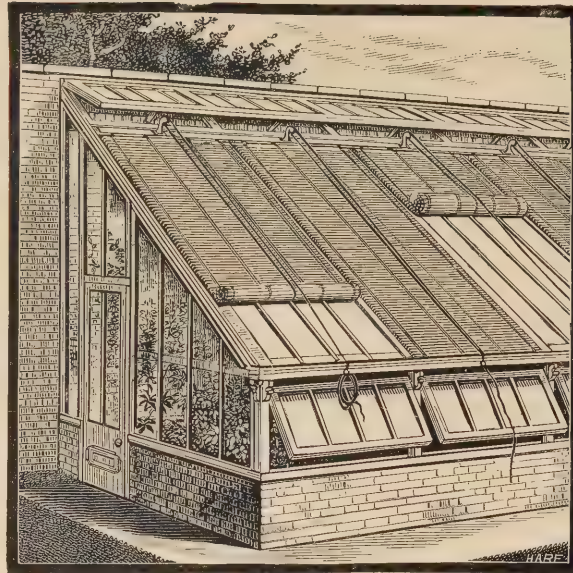
A nest of one dozen Cap Glasses pack into a crate, charged 1/6.

Carriage Paid on orders of 40/- and upwards.

TERMS: NET CASH.

ARE THE  
**Sole Agents for Great Britain.**

MADE ENTIRELY  
 OF  
 WOOD AND ZINC.



UNEQUALLED  
 FOR  
 DURABILITY.

Fig. 62.

### PARISIAN GREENHOUSE BLINDS,

For Outside use on Horticultural Buildings. (Awarded 40 Prize Medals.)

These Blinds, which are extensively used on the Continent, are made of thin wood laths  $\frac{3}{4}$  of an inch in breadth, with  $\frac{1}{4}$  inch spaces between them, the laths being connected by flat zinc chains. The sun's rays are thus broken and diffused in a manner most beneficial to the plants. The Blinds are painted green, if not specially ordered to the contrary. They can easily be taken down at any time, but are usually left fixed throughout the entire year, affording protection from frost in Winter, as well as shade from the sun in Summer. They are particularly neat in appearance, and although very light are not affected by wind, and are more durable than blinds of any other kind, in fact, they are almost imperishable. A single cord running over a pulley at the top, rolls up each blind from the bottom, as shewn in the above illustration, and they come down by their own weight when the cord is released. They are supplied direct from the Manufactory in Paris in about a fortnight after the date of order, and are made to any size required, but the width should not be more than about five feet.

In sending measurements for Blinds, it is necessary to name the extreme outside length and width, allowing a space of  $1\frac{1}{2}$  to 2 inches between the Blinds; also to state if they are for a roof or to be fixed in an upright position, and to give the height from the ground to the eaves.

### DIRECTIONS FOR FIXING.

When the Blinds are required to extend from a Ventilator (as in the illustration) to the eaves of a Greenhouse, it is usually necessary to have a wood Rail about  $2\frac{1}{2}$  in. by  $1\frac{1}{2}$  in. screwed on to the Rafters just below the Ventilator, to which to hang the Blinds. In many cases, however, this is not needed, as the blinds can be fixed to the wood framework of the glasshouse. Upon this rail, or other woodwork, and over the centre of each blind, screw one of the Iron Pulley Brackets (see illustration), then fasten the Brass Clips and Rings to the top lath of each Blind, a clip being put close to each of the zinc chains (or, if there are more than four chains, a clip to every alternate chain). To the front edge of the wood rail, and exactly opposite each clip and ring, fix a Brass Screw Hook to which to hang the Blinds, also fix one Screw-Eye in the same front edge, exactly under the pulley bracket, and fasten one end of the cord to this Screw-Eye. Now hang the Blind, bringing the cord down underneath it, then up over the top to the Pulley and down again to the eaves. Fix the Cord-Holder (with the disc facing upwards) to the eaves or any other part of the woodwork which may be suitable, and in a convenient position.

Vertical Blinds are hung very similarly, but the Iron Brackets for the Pulleys are not required.

For Triangular or other portions of Roofs on which the Blinds cannot be rolled up, they can be supplied to the requisite shapes (measured and charged as square), and fixed with holders in such a manner as to be easily removed for the Winter if desired.

### Price.

Packed and Delivered, Carriage Paid to any Railway Station in Great Britain, and many parts of the Continent,  $5\frac{1}{4}$  d. per Square Foot. If the quantity ordered amounts to less than 200 feet, the price is 6d., and if less than 100 feet,  $6\frac{1}{2}$  d. per foot, the cost of Carriage being heavy on small orders.

*Fittings*, including Iron Brackets with brass pulleys, Brass Clips, Hooks, Eyes, Cord Holders, Cord and Screws, from  $2\frac{1}{6}$  to  $4\frac{1}{6}$  each Blind extra, according to size and position.

TERMS: NET CASH.

CANVAS, TIFFANY, AND OTHER BLINDS SUPPLIED TO ORDER.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



# HOT WATER HEATING APPARATUS.

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For Horticultural Buildings, Churches, Chapels, Schools,  
Residences, &c.

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**THE BOILERS** here shewn are the best that are made for their respective purposes, but we also supply a great number of other forms of capital Boilers, of which we are at any time glad to send particulars and to advise as to their suitability for the special purposes under consideration.

In deciding on the size of any Boiler it should be borne in mind, that to do its work by slow combustion, and consequently with the greatest economy, it should not be used for heating more than two-thirds, or at the most three fourths of the quantities stated in the lists as the heating powers,—these latter being the maximum quantities which the Boilers will heat under the most favourable circumstances.

Every Boiler is properly tested by hydraulic pressure before leaving the works.

All Boilers are **Delivered Carriage Paid** to any Railway Station in Great Britain and to the principal Sea Ports in Ireland.

**THE HOT WATER PIPES** and Connections are of cast iron, well finished and of suitable thickness, being much heavier than similar goods which are regularly sold for the purpose by some firms.

We have for many years made Hot Water Pipe Joints with India rubber rings of special quality, with the most satisfactory results; these joints are much more quickly made, and are more reliable than the old-fashioned "rust" joints. Being elastic, they are not affected by the expansion and contraction of the pipes, and they can at any time be taken to pieces without difficulty.

**WROUGHT IRON PIPES** are used if preferred, but they are not so durable as cast iron, and the cost is more.

**PLANS AND ESTIMATES** prepared, and an experienced Engineer sent to advise, when desired, for Warming all kinds of Buildings in any part of the United Kingdom or elsewhere.

Competent Workmen are sent to fix, and **Efficiency is guaranteed.**

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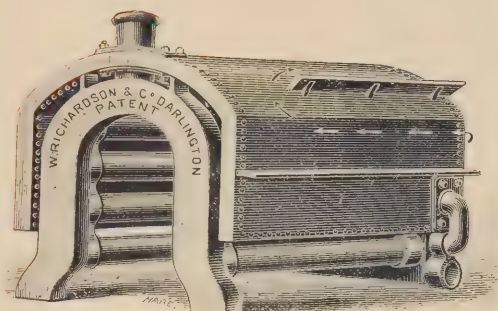
**ALL HOT WATER GOODS ARE SENT CARRIAGE PAID except orders under £3.**

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**TERMS: NET CASH.**

**HORTICULTURAL BUILDERS, & HEATING ENGINEERS.**

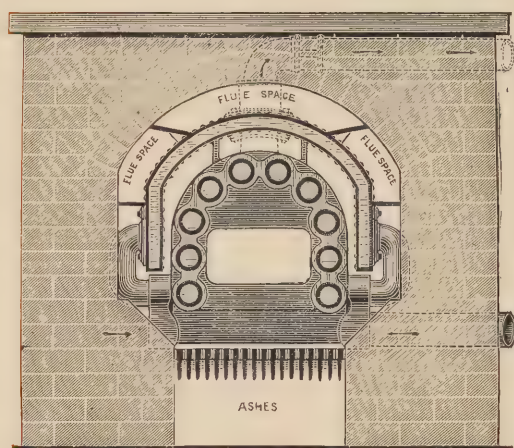
## RICHARDSON'S PATENT HOODED TUBULAR BOILER.



(PERSPECTIVE VIEW.)

These Boilers are believed to be more powerful in proportion to the quantity of fuel used than any others that are made. Very carefully conducted experiments have proved that they will, with an equal amount of fuel, heat more than twice the quantity of piping that can be heated by an ordinary saddle boiler, and that a very large saving of fuel is consequently effected; their proportions are such that the fire can be kept up from 12 to 24 hours without attention.

Having been in use for some years, the "Hooded Tubular Boilers" have been thoroughly tested, and the highest testimonials have been received from the owners.



(CROSS SECTION.)

They are so constructed that the fire is surrounded by horizontal cast iron tubes placed in such a way that the most direct and intense heat acts, not only upon *them*, but also upon a wrought iron saddle or "hood," which encloses them; thus the advantages of the two best forms of boilers hitherto made (the plain saddle and the tubular saddle) are combined in one. This combination is so arranged that a larger amount of *direct* heating surface is available than has probably ever before been obtained, the whole of the tubes and the inner surface of the saddle being in immediate contact with the fire. The value of this is readily understood when it is borne in mind that direct heating surface is worth, in effect, from three to six times as much as the surface where the heat is not direct. The flame and combustible gases are carried by flues over the outside of the saddle, so that the whole of the boiler is enveloped in them, and the heat from the fuel is expended before the chimney is reached.

### Price List.

1st SECTION.					2nd SECTION.					3rd SECTION.				
Width within tubes, 13½ in.		Height do., 20 in.			Width within tubes, 16½ in.		Height do., 24 in.			Width within tubes, 20 in.		Height do., 25½ in.		
Width over all, 37½ in.		Height do., 29 in.			Width over all, 44 in.		Height do., 34 in.			Width over all, 50 in.		Height do., 37 in.		
No.	Length	Heating Power 4 in. Pipe	Price of Boiler	Price of Fittings*	No.	Length	Heating Power 4 in. Pipe	Price of Boiler	Price of Fittings*	No.	Length	Heating Power 4 in. Pipe	Price of Boiler	Price of Fittings*
	Inches	Feet	£ s. d.	£ s. d.		Inches	Feet	£ s. d.	£ s. d.		Inches	Feet	£ s. d.	£ s. d.
1	30	850	15 0 0	3 3 0	8	36	1500	24 0 0	4 5 0	15	60	2900	38 0 0	6 0 0
2	33	950	16 10 0	3 5 0	9	42	1750	26 10 0	4 12 6	16	66	3200	41 0 0	6 7 6
3	36	1050	18 0 0	3 10 0	10	48	2000	29 0 0	5 0 0	17	72	3500	44 0 0	6 15 0
4	42	1250	19 10 0	4 0 0	11	54	2250	31 10 0	5 7 6	18	78	3800	47 0 0	7 2 6
5	48	1425	21 0 0	4 10 0	12	60	2500	34 0 0	5 15 0	19	84	4100	50 0 0	7 10 0
6	54	1600	22 10 0	5 0 0	13	66	2750	36 10 0	6 2 6	20	90	4400	53 0 0	7 17 6
7	60	1775	24 0 0	5 10 0	14	72	3000	39 0 0	6 10 0	21	96	4700	56 0 0	8 5 0

One flow and two return Sockets are on each Boiler.

\* Fittings include furnace front with two sets of sliding doors, fire bars, bearers, dead plates, soot doors, and damper with frame.

Stoke Irons extra; Price from 7/6 to 15/- per set.

Delivered Carriage Paid to any Railway Station in Great Britain.

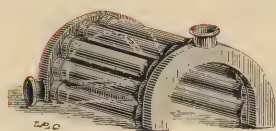
TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



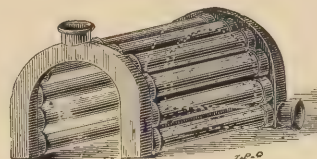
## TUBULAR SADDLE BOILERS.

(CAST IRON)



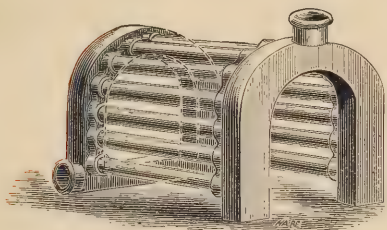
A

Outside Sizes (Sockets not measured).			Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.*		
Length	Width	Height		£	s.	d.	£	s.	d.
Inches	Inches	Inches	Feet	£	s.	d.	£	s.	d.
21	17	11½	200	2	16	0	2	0	0
24	"	"	220	3	0	0	2	2	6
27	"	"	240	3	4	0	2	5	0
30	"	"	260	3	8	0	2	7	6
33	"	"	280	3	12	0	2	10	0



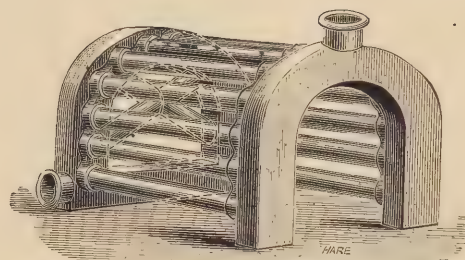
A2

Outside Sizes (Sockets not measured)			Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.		
Length	Width	Height							
Inches	Inches	Inches	Feet	£	s.	d.	£	s.	d.
24	17	15	275	3	10	0	2	2	6
27	"	"	300	3	16	0	2	5	0
30	"	"	340	4	2	0	2	7	6
33	"	"	370	4	8	0	2	10	0
36	"	"	400	4	14	0	2	12	6



B

Outside Sizes (Sockets not measured).			Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.*		
Length	Width	Height							
Inches	Inches	Inches	Feet	£	s.	d.	£	s.	d.
24	20	23	380	4	18	0	2	10	0
27	"	"	430	5	6	0	2	15	0
30	"	"	480	5	14	0	2	17	6
33	"	"	530	6	2	0	3	0	0
36	"	"	570	6	10	0	3	5	0



D

Outside Sizes (Sockets not measured)			Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.*		
Length	Width	Height							
Inches	Inches	Inches	Feet	£	s.	d.	£	s.	d.
36	24½	27	1000	11	10	0	4	5	0
42	"	"	1160	12	10	0	4	12	6
48	"	"	1330	13	10	0	5	0	0
54	"	"	1500	14	10	0	5	5	0
60	"	"	1670	15	10	0	5	10	0
66	"	"	1840	16	10	0	5	15	0

Each Boiler has one flow and two return sockets.

\* Fittings include furnace front, fire bars, bearers, dead plate, soot doors (where required), and damper.

Stoke Irons extra, price, 6/- to 15/- per set.

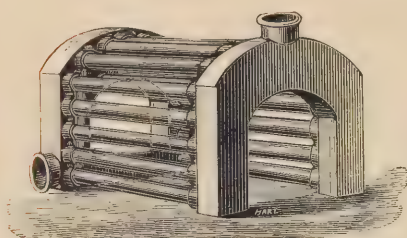
Delivered Carriage Paid to any Railway Station in Great Britain.

TERMS: NET CASH.

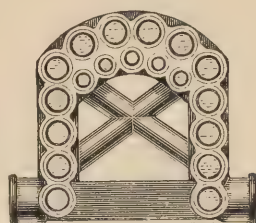
HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

## IMPROVED TUBULAR SADDLE BOILERS, with Double Tubes at top.

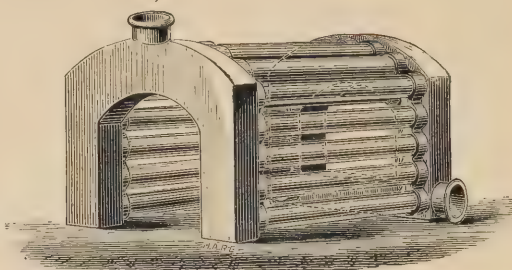
(Each with one flow and two return sockets.)



M



CROSS SECTION.

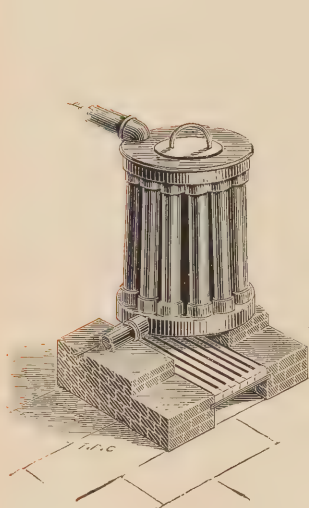


N

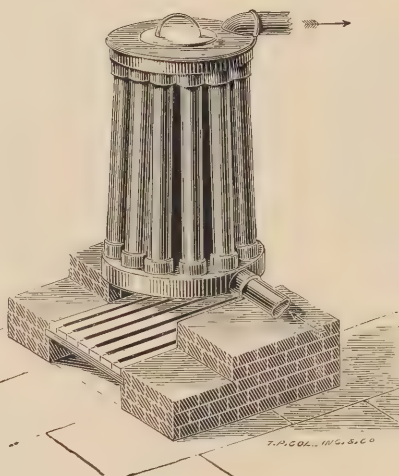
Outside Sizes (Sockets not measured.)			Heating Power in 4 inch Pipe.	PRICE.			Price of Fittings.*		
Length	Width	Height							
Inches	Inches	Inches	Feet	£	s.	d.	£	s.	d.
30	21	23	750	9	10	0	2	17	6
33	"	"	825	10	0	0	3	0	0
36	"	"	900	10	10	0	3	5	0
39	"	"	975	11	0	0	3	10	0
42	"	"	1050	11	10	0	3	15	0
48	"	"	1200	12	10	0	4	0	0

Outside Sizes (Sockets not measured)			Heating Power in 4 inch Pipe.	PRICE.			Price of Fittings.		
Length	Width	Height							
Inches	Inches	Inches	Feet	£	s.	d.	£	s.	d.
36	24½	27	1225	14	10	0	4	5	0
42	"	"	1450	16	0	0	4	12	6
48	"	"	1675	17	10	0	5	0	0
54	"	"	1900	19	0	0	5	5	0
60	"	"	2125	20	10	0	5	10	0
66	"	"	2350	22	0	0	5	15	0

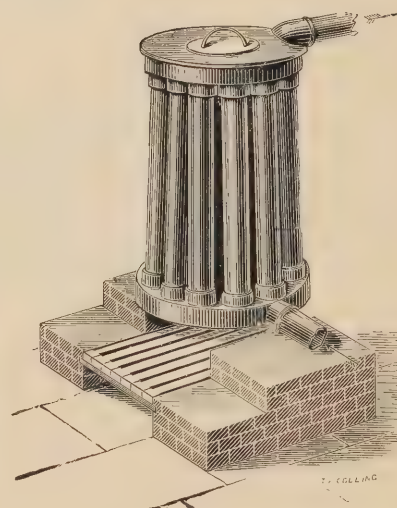
## UPRIGHT TUBULAR BOILERS.



F



G



H

Outside Sizes (Sockets not measured.)		Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.*		
Height	Dia. at Bottom							
Inches	Inches	Feet	£	s.	d.	£	s.	d.
24	17	280	4	0	0	2	10	0
27	"	315	4	10	0	2	10	0
30	"	340	5	0	0	2	10	0

Outside Sizes (Sockets not measured.)		Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.*		
Height	Dia. at Bottom							
Inches	Inches	Feet	£	s.	d.	£	s.	d.
30	19	450	6	0	0	3	10	0
33	"	490	6	10	0	3	10	0
36	"	530	7	0	0	3	10	0

Outside Sizes (Sockets not measured.)		Heating Power in 4 inch Pipe.	PRICE of Boiler.			PRICE of Fittings.*		
Height	Dia. at Bottom							
Inches	Inches	Feet	£	s.	d.	£	s.	d.
36	27	870	10	0	0	4	10	0
39	"	930	10	10	0	4	10	0
42	"	990	11	0	0	4	10	0

Delivered Carriage Paid to any Railway Station in Great Britain.

Each Boiler has one flow and one return socket.

\* Fittings include furnace front, fire bars, bearers, dead plate, soot doors (where required), and damper.  
Stoke irons extra, price 7/6 to 15/- per set.

TERMS: NET CASH.

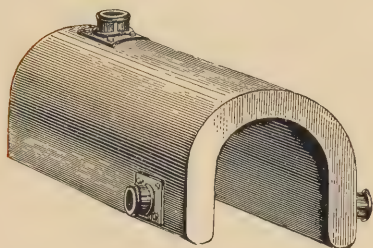
HORTICULTURAL BUILDERS, &amp; HEATING ENGINEERS.



## WROUGHT IRON BOILERS.

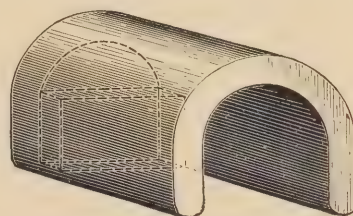
The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a Discount** off the Price of almost any boiler ; the Discount varying according to the kind and size of boiler selected.

## PLAIN SADDLE BOILER.



## SADDLE BOILER.

With Waterway Check Bridge.



2 in. to 3 in. Waterway, according to size of Boiler.

## PRICE LIST, exclusive of Sockets.

No.	SIZE OF BOILER.		Approximate Heating Power 4 inch Pipe.	Price of Boiler.			Price of Furnace Fittings.		
	Long.	Inside arch.		£	s.	d.	£	s.	d.
1	18	10	11	2	7	6	2	2	6
2	18	12	12	2	17	6	2	5	0
3	21	10	11	2	15	0	2	7	6
4	21	12	12	3	2	6	2	7	6
6	24	12	12	3	7	6	2	12	6
7	24	14	14	3	17	6	2	15	0
8	27	12	12	3	15	0	2	17	6
9	27	14	14	4	5	0	2	17	6
10	30	12	12	4	0	0	3	0	0
11	30	14	14	4	17	6	3	2	6
12	33	12	12	4	10	0	3	5	0
13	33	14	14	5	2	6	3	7	6
15	36	14	14	5	7	6	3	12	6
16	36	16	16	6	7	6	3	12	6
18	42	16	16	8	0	0	3	17	6
19	42	18	18	9	0	0	4	0	0
21	48	16	16	9	0	0	4	10	0
22	48	18	18	10	5	0	4	15	0
23	48	21	18	10	15	0	4	17	6
24	48	21	21	11	7	6	4	17	6

## PRICE LIST, exclusive of Sockets.

No.	SIZE OF BOILER.			Approximate Heating Power 4 inch Pipe.	Price of Boiler.			Price of Boiler			Price of Furnace Fittings.		
	Long.	Inside arch.			5/16 in. plates			3/8 in. plates					
	L.	W.	D.	Feet	£	s.	d.	£	s.	d.	£	s.	d.
1	24	14	14	500	6	7	6	7	10	0	2	15	0
2	30	14	14	625	7	10	0	9	0	0	3	2	6
3	30	16	16	725	8	10	0	10	0	0	3	5	0
4	33	14	14	650	8	0	0	9	10	0	3	7	6
5	33	16	16	775	9	0	0	10	15	0	3	10	0
6	36	14	14	750	8	12	6	10	5	0	3	12	6
7	36	16	16	875	9	15	0	11	12	6	3	12	6
8	42	14	14	800	10	2	6	12	0	0	3	15	0
9	42	16	16	975	11	7	6	13	10	0	3	17	6
10	42	18	18	1100	12	15	0	15	0	0	4	0	0
11	48	16	16	1125	12	15	0	15	0	0	4	10	0
12	48	18	18	1250	14	0	0	16	15	0	4	15	0
13	48	21	21	1400	16	5	0	19	5	0	4	17	6
14	48	24	21	1525	17	0	0	20	0	0	5	2	6
15	54	21	18	1450	16	10	0	19	10	0	5	7	6
16	54	21	21	1600	18	5	0	21	15	0	5	12	6
17	54	24	21	1700	19	0	0	22	10	0	5	17	6
18	60	21	18	1600	18	0	0	21	5	0	6	2	6
19	60	21	21	1775	20	0	0	23	15	0	6	2	6
20	60	24	21	1875	20	15	0	24	10	0	6	10	0

Sockets extra (including fixing) 2 in. 4/6, 3 in. 5/6, 4 in. 6/6 each net.

Delivered Carriage Paid to any Railway Station in Great Britain.

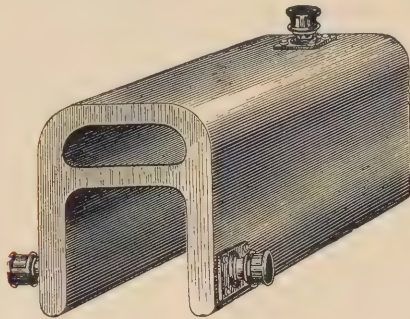
TERMS : NET CASH.

## WROUGHT IRON BOILERS—*continued.*

The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a Discount** off the price of almost any boiler; the Discount varying according to the kind and size of boiler selected.

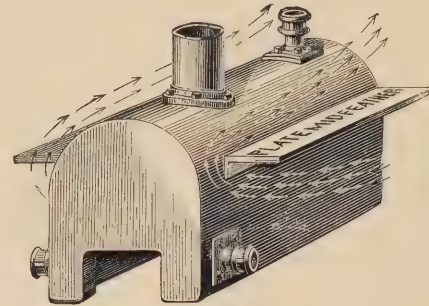
### "CHATSWORTH" BOILER,

With waterway back end and return flue through crown.



### "ARGYLE" BOILER, (Top Feeder.)

With Plate Midfeathers, and Waterway Front and Back.



PRICE LIST, exclusive of Sockets or Plugs.

No.	SIZE OF BOILER.			Approximate Heating Power, 4 inch Pipe	Price of Boiler, 5/16 in. Plate			Price of Boiler, 3/8 in. Plate			Price of Furnace Fittings		
	Long	Inside	Arch										
	L.	W.	D.	Feet.	£	s.	d.	£	s.	d.	£	s.	d.
0	24	12	12	400	9	15	0	11	15	0	2	12	6
1	24	14	14	450	10	10	0	12	10	0	2	15	0
2	30	14	14	650	12	10	0	15	0	0	2	17	6
3	30	16	16	800	14	0	0	16	10	0	3	0	0
4	33	14	14	750	13	15	0	16	5	0	3	0	0
5	33	16	16	900	15	5	0	17	15	0	3	6	0
6	36	14	14	850	14	15	0	17	10	0	3	8	0
7	36	16	16	1000	16	10	0	19	10	0	3	14	0
8	42	14	14	1000	17	0	0	20	0	0	3	16	0
9	42	16	16	1150	18	15	0	22	0	0	3	18	0
10	42	18	18	1250	21	0	0	24	10	0	4	0	0
11	48	16	16	1300	21	10	0	25	10	0	4	2	6
12	48	18	18	1450	23	15	0	28	0	0	4	6	0
13	48	21	21	1600	26	15	0	32	0	0	5	5	0
14	48	24	21	1700	29	0	0	34	10	0	5	7	6
15	54	21	18	1800	29	10	0	35	0	0	5	7	6
16	54	21	21	1850	30	10	0	36	0	0	5	10	0
17	54	24	21	1900	32	0	0	37	10	0	5	12	6
18	60	21	18	2000	32	0	0	37	10	0	5	12	6
19	60	21	21	2050	33	10	0	39	0	0	5	15	0
20	60	24	21	2100	35	0	0	41	10	0	5	17	6
21	66	24	21	2300	39	0	0	45	15	0	6	2	6
22	72	24	21	2500	42	10	0	50	0	0	6	7	6

When no thickness of Plate is given in order, Boilers are made from  $\frac{1}{8}$  in. plates.

PRICE LIST, exclusive of Sockets.

No.	SIZE OF BOILER.			Outside Measure	Approximate Heating Power, 4 in. Pipe	Price of Boiler.			Price of Furnace Fittings			
	Inside Arch.					£ s. d.			£ s. d.			
	L.	W.	D.	W.	D.	Feet.	£ s. d.			£ s. d.		
1	20 × 14 × 14			19 × 16½		500	8 0 0			2 15 0		
2	24 × 16 × 16			21 × 18½		700	10 0 0			3 0 0		
3	30 × 16 × 16			21 × 18½		900	11 15 0			3 5 0		
4	30 × 18 × 18			23 × 20½		1000	13 5 0			3 10 0		
5	36 × 16 × 16			21 × 18½		1000	13 10 0			3 10 0		
6	36 × 18 × 18			24 × 21		1100	14 10 0			3 15 0		
7	42 × 18 × 18			24 × 21		1300	16 10 0			4 5 0		
8	42 × 22 × 20			28 × 23		1400	17 5 0			4 10 0		
9	48 × 22 × 20			28 × 23		1650	20 0 0			5 0 0		
10	54 × 24 × 24			30 × 27		1900	23 0 0			5 10 0		
11	60 × 24 × 28			30 × 31		2400	26 10 0			6 10 0		

Sockets extra (including fixing) 2 in. 4/6, 3 in. 5/6, 4 in. 6/6 each net.

Delivered Carriage Paid to any Railway Station in Great Britain.

TERMS: NET CASH.

HORTICULTURAL BUILDERS. & HEATING ENGINEERS.

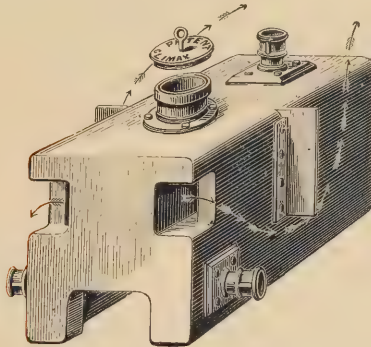


## WROUGHT IRON BOILERS—*continued.*

The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a discount** off the Price of almost any Boiler, the discount varying according to the kind and size of Boiler selected.

### PATENT CLIMAX BOILER, (TOP FEEDER)

With Waterway front and back ends, and two return side flues.



PRICE LIST, including 1 Flow and 2 Return Sockets, Midfeathers for conducting Flues, Feed Hole, Cover, &c., as shown.

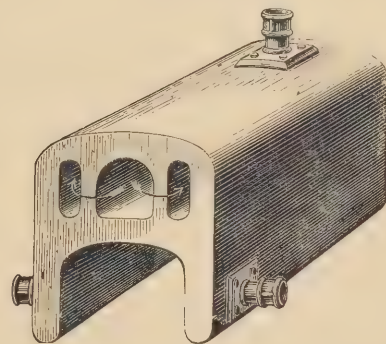
No.	Outside Measure of Boiler.	Approximate Heating Power 4in. Pipe.	Price of Boiler		Price of Furnace Fittings	
			£	s. d.	£	s. d.
0	L. W. D. 24 X 21 X 21	500	14	0 0	2	15 0
1	24 X 24 X 27	750	16	0 0	3	0 0
2	30 X 24 X 27	1000	18	0 0	3	5 0
3	36 X 27 X 30	1500	22	0 0	4	0 0
4	42 X 30 X 33	2000	27	0 0	4	15 0
5	42 X 33 X 36	2250	30	0 0	4	15 0
6	48 X 36 X 36	2750	37	0 0	5	10 0
7	54 X 39 X 42	3500	47	0 0	6	0 0
8	60 X 42 X 42	4000	55	0 0	7	0 0
9	66 X 42 X 42	4500	64	0 0	7	10 0
10	72 X 42 X 42	5000	72	0 0	8	0 0
11	78 X 42 X 42	5500	80	0 0	8	10 0
12	84 X 42 X 42	6000	88	0 0	9	0 0

### GOLD MEDAL BOILER,

With Waterway front and back ends and 3 return flues through crown.

PRICE LIST, including 1 Flow and 2 Return Sockets and Plugs.

No.	Size of Boiler		Outside Measurement	Approximate Heating Power 4in. pipe.	Price of Boiler	Price of Furnace Fittings
	Long.	Inside arch				
	L. W. D.	W. D.	Feet	£ s. d.	£ s. d.	
1	24 X 16 X 16	22 X 30	500	15 0 0	2 15 0	
2	30 X 16 X 16	22 X 30	800	16 0 0	3 0 0	
3	36 X 18 X 18	24 X 32	1000	18 0 0	4 0 0	
4	42 X 18 X 18	24 X 32	1200	22 0 0	4 3 0	
5	48 X 18 X 18	24 X 32	1500	26 0 0	4 6 0	
6	48 X 21 X 21	27 X 35	1700	30 0 0	5 5 0	
7	54 X 21 X 21	27 X 35	2000	35 0 0	5 10 0	
8	60 X 21 X 21	29 X 36	2750	40 0 0	5 15 0	
9	66 X 24 X 21	32 X 40	3000	45 0 0	6 10 0	
10	66 X 24 X 21	32 X 40	3250	50 0 0	7 0 0	
11	72 X 24 X 21	32 X 40	3500	56 0 0	7 10 0	



Delivered Carriage Paid to any Railway Station in Great Britain.

TERMS: NET CASH.

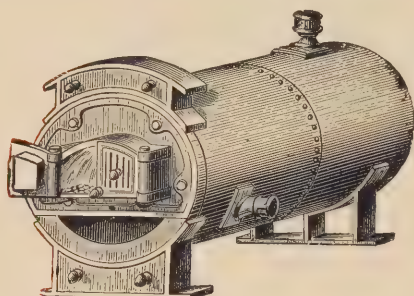
HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

WROUGHT IRON BOILERS—*continued.*

The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a Discount** off the price of almost any Boiler, the discount varying according to the kind and size of Boiler selected.

## CORNISH "TRENTHAM" BOILER,

With or without Waterway Back End.



PRICE LIST, including 1 Flow and 2 Return Sockets, and Fittings, as shown.

Size of Boiler		With Open End		With Waterway Check End	
Length	Extern'l Diam.	Approximate Heating Power 4in. Pipe	Price of Boiler complete	Approximate Heating Power 4in. Pipe	Price of Boiler complete
ft. in.	ft. in.	Feet.	£ s. d.	Feet	£ s. d.
3 0	2 8	925	25 0 0	1100	28 15 0
3 6	2 8	1075	27 10 0	1250	31 0 0
4 0	2 8	1225	30 10 0	1400	34 10 0
4 6	2 8	1375	34 0 0	1550	38 0 0
5 0	2 8	1525	37 0 0	1700	41 0 0
5 6	3 0	1800	40 10 0	2000	45 10 0
6 0	3 0	2000	44 0 0	2200	49 0 0
6 6	3 0	2150	47 0 0	2350	51 10 0
7 0	3 0	2500	51 0 0	2700	56 0 0
8 0	3 0	2850	56 0 0	3050	61 10 0
6 0	3 6	2550	52 0 0	2850	58 0 0
7 0	3 6	2950	57 0 0	3250	63 0 0
8 0	3 6	3350	62 10 0	3650	70 0 0
9 0	3 6	3750	70 0 0	4050	78 10 0
10 0	3 6	4150	77 10 0	4450	86 10 0
10 0	4 0	4700	87 10 0	5100	97 10 0
11 0	4 0	5200	98 10 0	5600	109 0 0
12 0	4 0	5700	110 0 0	6100	121 0 0

Cross Tubes can be welded in these Boilers from 20s. to 40s. each net extra over the above prices

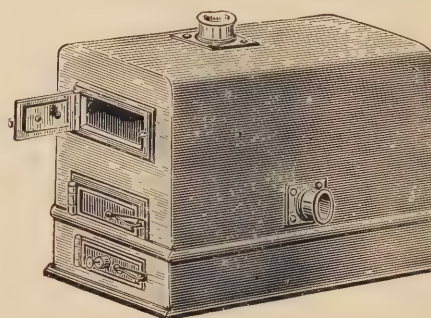
## INDEPENDENT BOX BOILER,

(TOP FEEDER,)

With Waterway front and back ends.

PRICE LIST, including one 2in. Flow and one 2in. Return Socket.

No.	Outside Measure of Boiler only.	Approximate Heating Power, 2in. Pipe.	Height of Flow Socket.	Price
	L. W. D.	Feet	Inches	£ s. d.
1	18 x 18 x 21	800	32	9 7 6
2	24 x 18 x 21	900	32	11 0 0
3	24 x 24 x 21	1150	32	13 5 0
4	30 x 18 x 21	1150	32	13 5 0
5	30 x 24 x 21	1500	32	15 0 0
6	36 x 18 x 21	1500	32	15 0 0
7	36 x 24 x 21	1800	32	17 10 0
8	42 x 24 x 21	2000	32	19 10 0
9	48 x 24 x 21	2200	32	21 10 0



Delivered Carriage Paid to any Railway Station in Great Britain.

TERMS: NET CASH.

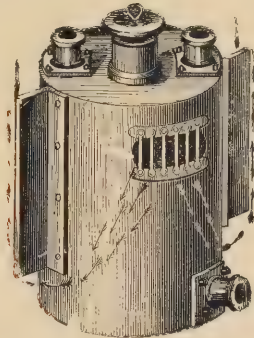
HORTICULTURAL BUILDERS, & HEATING ENGINEERS.



WROUGHT IRON BOILERS—*continued.*

The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a discount** off the price of almost any Boiler, the discount varying according to the kind and size of Boiler selected.

## PATENT "EXCELSIOR" BOILER.



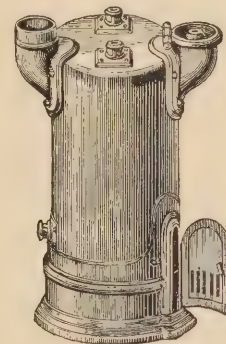
PRICE LIST, including 1 Flow and 1 Return Socket.

No.	Size of Boiler		Estimated Heating Power in 4in. pipe	Price of Boiler	Complete Set of Furnace Fittings
	High	Diam.			
	in.	in.	Feet	£ s. d.	£ s. d.
0	24	18	400	7 15 0	2 12 0
1	30	18	500	8 10 0	2 12 0
2	26	20	500	8 10 0	2 12 0
3	30	22	800	11 0 0	2 18 0
4	26	24	800	11 0 0	2 18 0
5	30	26	1000	14 10 0	3 3 0
6	30	28	1000	14 10 0	3 3 0
7	42	30	1500	19 0 0	3 12 0
8	48	36	2000	25 0 0	4 10 0
9	54	42	3000	35 0 0	5 15 0
10	60	48	4000	46 0 0	7 0 0
11	60	60	5000	57 10 0	9 10 0

PRICE LIST, including one 2in. Flow and one 2in. Return Socket.

No.	SIZE OF BOILER ONLY		Approximate Heating Power 2in. pipe	Height of Flow Pipe	Price of Boiler complete
	High	Diameter			
	Inches	Inches	Feet	Inches	£ s. d.
1	21	13	350	33	6 10 0
2	24	13	400	36	7 0 0
3	24	15	550	37	8 5 0
4	30	15	700	43	9 5 0
5	36	15	850	40	10 10 0
6	30	18	1050	45	13 0 0
7	36	18	1200	51	13 10 0
8	42	18	1300	57	14 12 6
9	36	21	1400	51	10 17 6
10	42	21	1600	57	18 0 0
11	48	21	1800	63	20 5 0
12	54	21	2000	60	22 10 0
13	42	24	2000	50	23 12 6
14	48	24	2400	65	27 0 0
15	54	24	2600	71	26 15 0
16	60	24	2800	77	20 0 0

## INDEPENDENT "DOME TOP" BOILER.



Delivered Carriage Paid to any Railway Station in Great Britain.

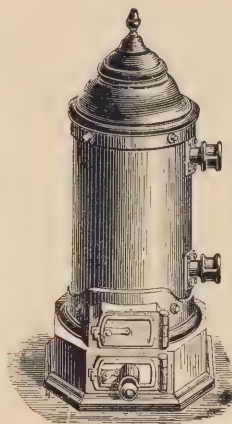
TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

## WROUGHT IRON BOILERS—*continued.*

The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a Discount** off the Price of almost any Boiler, the discount varying according to the kind and size of Boiler selected.

### INDEPENDENT CONICAL BOILER.



PRICE LIST, including one 2in. Flow and one 2in. Return Socket.

No.	Height over all	Diam. of Boiler.	Fitted with One Flow and Return Sockets	Approximate Heating Power zin. pipe	Price
	Ft. in.	Inches		Feet	£ s. d.
1	2 8	13	1, 14, or 14in. Wrt. Skts.	300	4 15 0
2	2 8	13	2 in. Cast Sockets	300	5 2 6
3	3 0	13	2 in. "	350	5 12 6
4	3 6	13	2 in. "	400	6 0 0
5	3 6	15	2 in. "	500	6 15 0
6	4 0	15	2 in. "	600	7 17 6
7	4 0	18	2 in. "	900	10 15 0
8	4 6	18	2 in. "	1050	11 17 6
9	5 0	18	2 in. "	1200	13 0 0
10	5 0	21	2 in. "	1400	15 5 0
11	5 6	21	2 in. "	1600	16 5 0
12	6 0	21	2 in. "	1700	17 10 0
13	5 6	24	2 in. "	1800	21 7 6
14	6 0	24	2 in. "	2000	24 5 0
15	6 6	24	2 in. "	2250	27 10 0
16	7 0	24	2 in. "	2500	31 0 0

### "PALATINE" OR "MANCHESTER" BOILER. (CONICAL.)

PRICE LIST, including one 2in. Flow and one 2in. Return Socket  
and Damper, as shewn.

Size of Boiler only	Size of Sock- ets	Approx. Heating Power zin. pipe	Price	Size of Boiler only	Size of Sock- ets	Approx. Heating Power zin. pipe	Price
H. B. T.	In.	Feet	£ s. d.	H. B. T.	In.	Feet	£ s. d.
18×14×12	1½	300	3 15 0	42×20×16	2	1000	11 0 0
24×14×12	2	400	4 8 0	48×20×16	2	1100	12 0 0
30×14×12	2	500	5 0 0	36×26×20	2	1300	14 15 0
30×16×14	2	600	6 10 0	42×26×20	2	1450	16 0 0
36×16×14	2	700	7 10 0	48×26×20	2	1600	17 0 0
42×16×14	2	800	8 8 0	36×36×28	2	2000	26 0 0
48×16×14	2	900	9 0 0	48×36×28	2	2700	30 0 0
36×20×16	2	950	10 5 0				



Delivered Carriage Paid to any Railway Station in Great Britain.

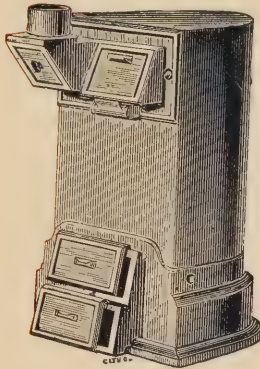
TERMS: NET CASH.



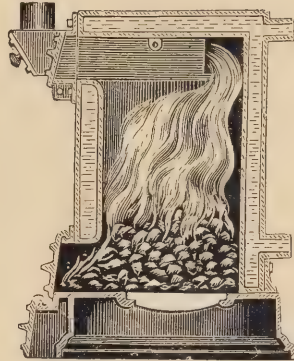
WROUGHT IRON BOILERS—*continued.*

The Prices given in the following lists of Wrought Iron Boilers are according to the old standard lists used by the trade, but we are now in a position to **allow a Discount** off the Price of almost any Boiler, the discount varying according to the kind and size of Boiler selected.

## “HALIFAX” OR “FINSBURY” BOILER.

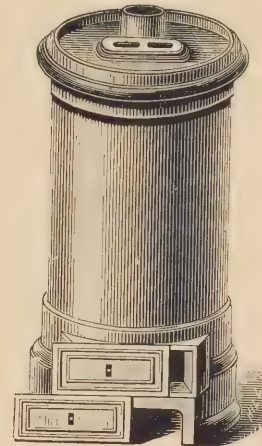


ELEVATION.



SECTION

## STAR BOILER.



## PRICE LIST.

Size of Boiler only exclusive of stand	Approximate Power zin. pipe	Price
H. W. D.	Feet	£ s. d.
21 × 14 × 14	500	5 0 0
24 × 14 × 14	550	5 10 0
27 × 14 × 14	600	6 0 0
30 × 14 × 14	650	6 10 0
24 × 16 × 16	700	7 5 0
30 × 16 × 16	850	8 10 0
36 × 16 × 16	1000	10 0 0
42 × 16 × 16	1200	11 10 0

Including one Flow and one Return Socket.

Position of Sockets (at back) and Smoke Flue as above, unless ordered to the contrary.

## PRICE LIST.

No.	External Sizes High Diam.	Size of Sockets	Approximate Heating Power zin. pipe	Price
	In. In. Inches.		Feet	£ s. d.
1	21 × 10	1	150	2 5 0
2	26 × 12	1½	200	2 12 6
3	29 × 14	1½	300	3 0 0
4	34 × 14	1½	400	3 15 0
5	32 × 16	2	500	4 10 0
6	36 × 16	2	600	5 5 0
7	40 × 16	2	700	6 0 0

Including one Flow and one Return (Screwed) Sockets.

Position of Sockets (at back) and Smoke Flue as above, unless ordered to the contrary.

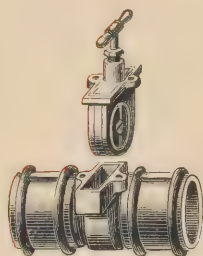
Delivered Carriage Paid to any Railway Station in Great Britain.

TERMS: NET CASH.

HORTICULTURAL BUILDERS, & HEATING ENGINEERS.

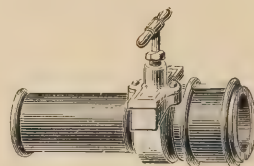
# IMPROVED HOT WATER VALVES.

## THROTTLE VALVES.



AWARDED THE SILVER MEDAL (HIGHEST PRIZE)

At the Royal Horticultural Society's Show,  
South Kensington, May, 1883.



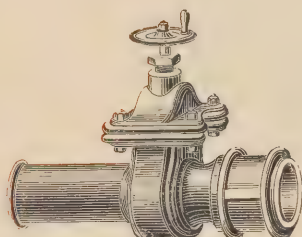
The above Throttle Valves are greatly superior to the ordinary kind. The Gland and its Seat can be removed and replaced as shewn above, without cutting or disconnecting any of the piping.

### PRICES.

Made with Socket and Spigot, or Double Socket,—2 in., 10/- each. 3 in., 12/6 each. 4 in., 15/- each.

## SCREW SLIDE VALVES,

With Waterway opening full size of pipe. Gun-metal Facings.

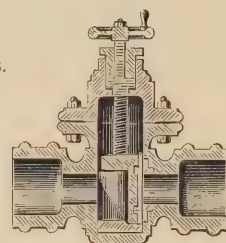


ELEVATION

### PRICES.

With Socket and Spigot, or Double Socket :

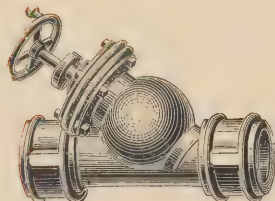
2 in., 18/6 each. 3 in., 25/6 each. 4 in., 30/- each.  
5 in., 75/- each. 6 in., 85/- each.



SECTION.

## MEDIUM SCREW VALVES,

With Waterway opening full size of pipe.

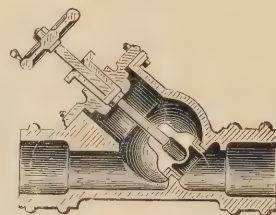


ELEVATION.

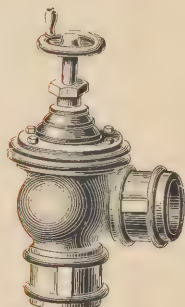
### PRICES.

With Socket and Spigot, or Double Socket :

2 in., 15/- each. 3 in., 20/- each. 4 in., 25/- each.



SECTION.



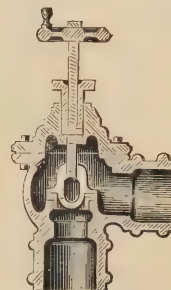
ELEVATION.

## ANGLE VALVES.

### PRICES.

With Socket and Spigot, or Double Socket :

2 in. 17/- each. 3 in., 22/6 each. 4 in., 27/- each.  
5 in., 65/- each. 6 in., 80/- each.

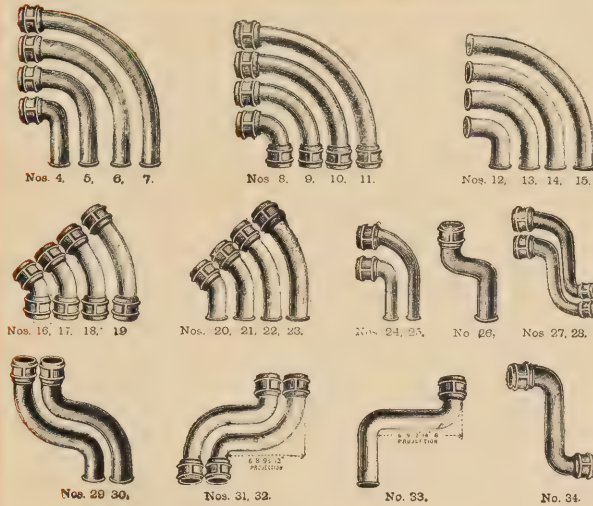
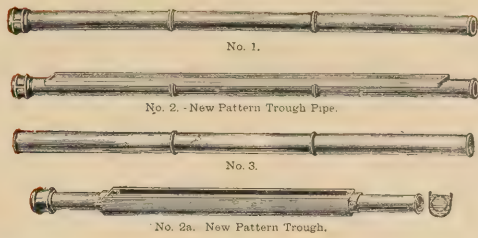


SECTION.

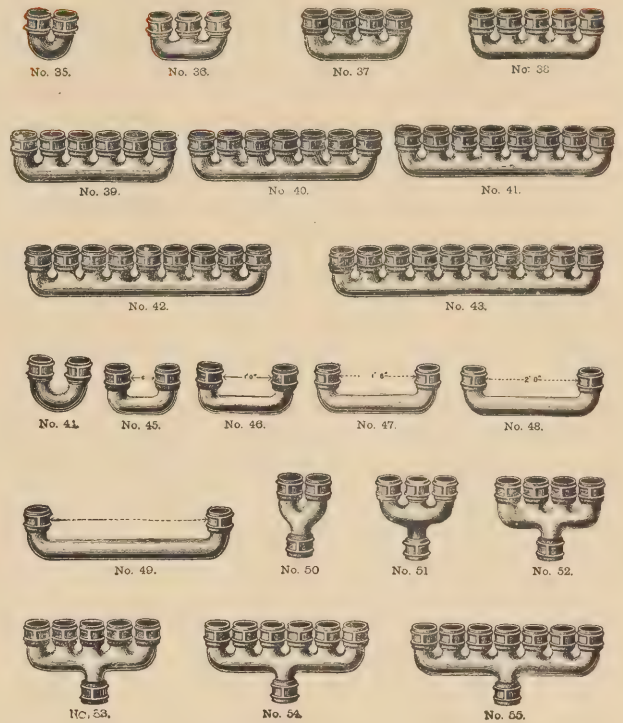
TERMS : NET CASH.



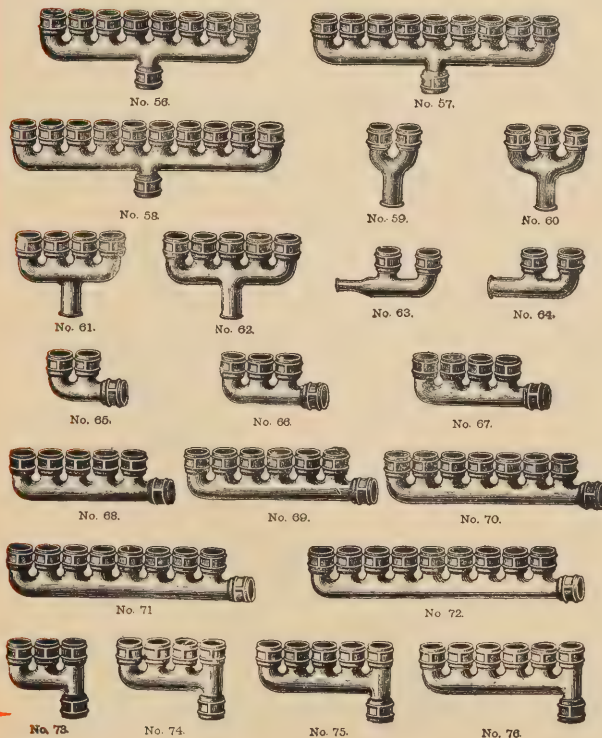
## HOT WATER PIPES &amp; CONNECTIONS.



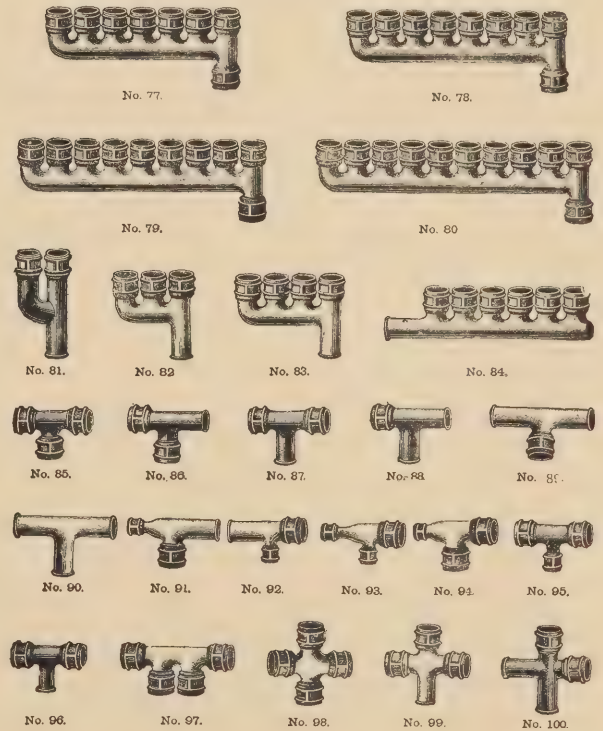
## HOT WATER CONNECTIONS—Continued.



## HOT WATER CONNECTIONS—Continued.



## HOT WATER CONNECTIONS—Continued.



## HOT WATER CONNECTIONS—Continued.

## HOT WATER CONNECTIONS—Continued.



No. 101



No. 102



No. 103



No. 104



No. 105



No. 123



No. 124



No. 125



No. 126



No. 127



No. 106



No. 107



No. 108



No. 109



No. 128



No. 129



No. 130



No. 131



No. 132



No. 110



No. 111



No. 112



No. 113



No. 133



No. 134



No. 135



No. 136



No. 137



No. 114



No. 115



No. 116



No. 117



No. 118



No. 138



No. 139



No. 140



No. 141



No. 142



No. 143



No. 144



No. 145



No. 146



No. 147



No. 148



No. 149



No. 119



No. 120



No. 121



No. 122



No. 150



No. 151



No. 152



No. 153

## PRICE LIST OF HOT WATER PIPES &amp; CONNECTIONS.

NO.	Size	LONG SOCKETS.					SHORT SOCKETS.					inches
		2	3	4	5	6	2	3	4	5	6	
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
1	Hot Water Pipes—2 in. cast in 6 ft. lengths } 3 in. and 4 in. cast in 6 ft. and 9 ft. lengths } Under 6 ft. ...	1 1½	1 9	2 3	4 0	5 6	1 0¾	1 8½	2 1½			per yd.
		1 6	2 6	2 10½	5 3	7 0	1 2½	2 4½	2 9			"
				(Lengths under 3 ft. charged as one yard).								"
2	Trough Pipes—6 ft. or 9 ft. lengths ...		4 6	5 7½				4 4½	5 5			"
3	Coil Pipes... ..	1 2½	1 9	2 3			1 2½	1 8½	2 1½			"
	Ditto in 2 ft. to 5 ft. 6 in. lengths ...		2 3	2 7½								"

2A New Pattern Trough, 6 ft. long, to attach to 9 ft. hot water pipe, to suit 3 in. or 4 in. pipe, 15s. each.

	FITTINGS.	Size	LONG SOCKETS.			SHORT SOCKETS.			inches
			2	3	4	2	3	4	
			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
4	Common Elbow ... ..		1 5	2 4	2 11		1 10	2 3	each
5	Do. 2nd radius ... ..		2 0	3 5	4 0		2 9	3 3	
6	Do. 3rd do. ... ..		3 2	4 11	6 0		4 3	5 0	"
7	Do. 4th do. ... ..		4 11	6 9	9 0		5 9	7 6	"
8	Double Socket Elbow ... ..		1 6	2 6	3 0		2 2	2 9	"
9	Do. 2nd radius ... ..		2 0	3 6	4 2		3 0	3 9	"
10	Do. 3rd do. ... ..		3 5	5 3	6 9		4 3	5 3	"
11	Do. 4th do. ... ..		5 3	7 0	9 9		5 9	7 6	"
12	Double Spigot Elbow ... ..		1 5	2 6	3 3				"
13	Do. 2nd radius ... ..		2 0	3 6	5 10				"
14	Do. 3rd do. ... ..		3 3	5 3	7 0				"
15	Do. 4th do. ... ..		5 3	6 9	9 9				"
16	Elbow, ½ circle, double socket ... ..		1 6	2 6	2 11		2 0	2 4	"
17	Do. 2nd radius ... ..		2 3	3 0	3 9		2 11	3 3	"
18	Do. 3rd do. ... ..		3 3	4 6	6 0		4 3	4 10	"
19	Do. 4th do. ... ..		4 10	6 0	8 3		5 9	7 0	"
20	Do. socket and spigot ... ..		1 5	2 3	2 7		1 9	2 3	"
21	Do. 2nd radius ... ..		2 0	2 9	3 6		2 8	3 0	"
22	Do. 3rd do. ... ..		3 0	4 6	5 8		4 0	4 6	"
23	Do. 4th do. ... ..		4 6	6 0	7 10		5 3	6 9	"



## PRICE LIST OF HOT WATER CONNECTIONS—continued.

NO.											LONG SOCKETS.			SHORT SOCKETS.			inches			
											Size									
											2	3	4	2	3	4				
											3×2	4×2	4×3	3×2	4×2	4×3				
											s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	"			
24	Elbow—Diminishing	...	...	...	...	...	...	...	...	...	1 9	2 0	2 3	1 6	1 9	1 11	each			
25	Do.	...	...	...	...	...	...	...	...	...	2 0	2 8	3 0	1 9	2 3	2 6	"			
26	Double Elbow	...	...	...	...	...	...	...	...	...	1 6	2 8	3 2		2 5	2 10	"			
27	Swan Neck—Diminishing	...	...	...	...	...	...	...	...	...	3×2	4×2	4×3	3×2	4×2	4×3	inches			
28	Do.	...	...	...	...	...	...	...	...	...	4 0	4 6	5 6	3 9	4 9	5 0	each			
	Do.	...	...	...	...	...	...	...	...	...	4 0	4 6	5 6	3 9	4 9	5 0	"			
29 & 30	Swan Neck Bend, in. projection	...	...	...	...	...	...	...	...	...	2 9	3 9	5 3		3 0	4 3	"			
31 & 32	Do. double socket, 6 in. projection	...	...	...	...	...	...	...	...	...	2 5	3 9	4 6		2 8	3 0	"			
31 & 32	Do. do. 8 in. do.	...	...	...	...	...	...	...	...	...	2 8	4 2	5 0		3 2	3 7	"			
31 & 32	Do. do. 9½ in. do.	...	...	...	...	...	...	...	...	...	2 9	4 8	5 6		3 1	3 9	"			
31 & 32	Do. do. 12 in. do.	...	...	...	...	...	...	...	...	...	3 0	5 3	6 0		3 3	4 0	"			
33	S Bend, socket and spigot, 6 in. projection	...	...	...	...	...	...	...	...	...	2 6	4 5	5 2		3 3	4 0	"			
33	Do. do. 9 in. do.	...	...	...	...	...	...	...	...	...	2 8	4 6	5 3		3 5	4 2	"			
33	Do. do. 12 in. do.	...	...	...	...	...	...	...	...	...	3 0	5 3	6 0		4 0	4 10	"			
33	Do. do. 14 in. do.	...	...	...	...	...	...	...	...	...	3 9	6 0	6 9		5 0	5 9	"			
33	Do. do. 16 in. do.	...	...	...	...	...	...	...	...	...	4 6	6 9	7 6		5 10	6 6	"			
34	Do. double socket, 6 in. do.	...	...	...	...	...	...	...	...	...	2 8	4 8	5 5		3 5	4 2	"			
34	Do. do. 9 in. do.	...	...	...	...	...	...	...	...	...	2 9	4 10	5 6		3 8	4 6	"			
34	Do. do. 12 in. do.	...	...	...	...	...	...	...	...	...	3 2	5 6	6 3		4 3	5 2	"			
34	Do. do. 14 in. do.	...	...	...	...	...	...	...	...	...	3 10	6 3	7 0		5 4	6 2	"			
34	Do. do. 16 in. do.	...	...	...	...	...	...	...	...	...	4 7	7 0	8 3		6 3	7 0	"			
35	Close Syphon, 2-way	...	...	...	...	...	...	...	...	...	1 9	3 0	3 9		2 8	3 0	"			
36	Do. 3-way	...	...	...	...	...	...	...	...	...	3 0	4 11	6 9		3 9	4 9	"			
36	Do. 4-way	...	...	...	...	...	...	...	...	...	4 2	6 9	7 11		5 3	6 9	"			
38	Do. 5-way	...	...	...	...	...	...	...	...	...	5 8	9 9	10 6		6 9	8 3	"			
39	Do. 6-way	...	...	...	...	...	...	...	...	...	7 2	11 3	12 9		8 3	10 0	"			
40	Do. 7-way	...	...	...	...	...	...	...	...	...	8 8	12 9	14 3		11 3	12 3	"			
41	Do. 8-way	...	...	...	...	...	...	...	...	...	10 0	15 0	15 9		12 9	14 0	"			
42	Do. 9-way	...	...	...	...	...	...	...	...	...	11 8	16 6	18 0				"			
43	Do. 10-way	...	...	...	...	...	...	...	...	...	13 6	18 9	21 0				"			
44	Open Syphon	...	...	...	...	...	...	...	...	...	2 0	3 3	4 6		3 0	4 0	"			
45	Do. 6 in.	...	...	...	...	...	...	...	...	...	2 3	3 9	5 3				"			
46	Do. 12 in.	...	...	...	...	...	...	...	...	...	3 0	4 6	6 0				"			
47	Do. 18 in.	...	...	...	...	...	...	...	...	...	3 9	5 3	6 9				"			
48	Do. 24 in.	...	...	...	...	...	...	...	...	...	4 6	6 0	7 6				"			
49	Do. 36 in.	...	...	...	...	...	...	...	...	...	6 0	7 6	9 0				"			
50	Outlet Syphon, 2-way	...	...	...	...	...	...	...	...	...	2 6	4 3	5 6		3 8	4 6	"			
51	Do. 3-way	...	...	...	...	...	...	...	...	...	4 2	6 9	7 6		5 3	6 5	"			
52	Do. 4-way	...	...	...	...	...	...	...	...	...	5 7	9 5	10 6		6 9	8 3	"			
53	Do. 5-way	...	...	...	...	...	...	...	...	...	7 2	11 8	12 9		8 3	10 0	"			
54	Do. 6-way	...	...	...	...	...	...	...	...	...	8 8	13 6	14 3		11 3	13 3	"			
55	Do. 7-way	...	...	...	...	...	...	...	...	...	10 1	15 0	17 3		13 6	15 0	"			
56	Do. 8-way	...	...	...	...	...	...	...	...	...	11 8	17 3	19 6		15 0	17 3	"			
57	Do. 9-way	...	...	...	...	...	...	...	...	...	13 1	19 1	21 9				"			
58	Do. 10-way	...	...	...	...	...	...	...	...	...	15 0	22 6	25 6				"			
59	Outlet Syphon, 2-way	...	...	...	...	...	...	...	...	...	2 5	4 0	5 3		3 6	4 2	"			
60	Do. 3-way	...	...	...	...	...	...	...	...	...	3 9	6 0	7 6		5 3	6 0	"			
61	Do. 4-way	...	...	...	...	...	...	...	...	...	5 8	9 0	10 6		6 9	7 10	"			
62	Do. 5-way	...	...	...	...	...	...	...	...	...	7 2	11 3	12 9		8 3	9 6	"			
63	Elbow Syphon, diminishing outlet	...	...	...	...	...	...	...	...	...	3×2	4×2	4×3				"			
		...	...	...	...	...	...	...	...	...	4 0	5 0	5 6				"			
64	Elbow Syphon Equal, spigot outlet	...	...	...	...	...	...	...	...	...	2 7	4 0	5 0		3 9	4 6	"			
65	Elbow Syphon, 2-way, socket outlet	...	...	...	...	...	...	...	...	...	2 9	4 3	5 3		3 9	4 6	"			
66	Do. 3-way do.	...	...	...	...	...	...	...	...	...	4 2	6 6	7 6		5 3	6 0	"			
67	Do. 4-way do.	...	...	...	...	...	...	...	...	...	5 8	9 5	10 6		6 9	7 10	"			
68	Do. 5-way do.	...	...	...	...	...	...	...	...	...	7 1	11 7	12 9		8 3	9 6	"			
69	Do. 6-way do.	...	...	...	...	...	...	...	...	...	8 7	13 6	14 3		11 3	13 0	"			
70	Do. 7-way do.	...	...	...	...	...	...	...	...	...	10 1	15 0	17 3		13 6	15 0	"			
71	Do. 8-way do.	...	...	...	...	...	...	...	...	...	11 7	17 3	19 6		15 0	17 3	"			
72	Do. 9-way do.	...	...	...	...	...	...	...	...	...	13 6	19 6	22 6				"			
73	Branch Syphon, 3-way do.	...	...	...	...	...	...	...	...	...	4 2	6 9	7 6		5 3	6 0	"			
74	Do. 4-way do.	...	...	...	...	...	...	...	...	...	5 7	9 4	10 6		6 9	7 10	"			

PRICE LIST OF HOT WATER CONNECTIONS—*continued.*

NO.											LONG SOCKETS.			SHORT SOCKETS.				inches.		
											Size	2	3	4	2	3	4			
												s. d.	s. d.	s. d.	s. d.	s. d.	s. d.			
75	Branch Syphon, 5-way, socket outlet	...	...	...	...	...	...	7	2	11	7	12	9	...	8	3	9	6	each	
76	Do. 6-way do.	...	...	...	...	...	...	8	7	13	6	15	0	...	11	3	13	0	"	
77	Do. 7-way do.	...	...	...	...	...	...	10	2	15	0	17	3	...	13	6	15	0	"	
78	Do. 8-way do.	...	...	...	...	...	...	11	7	17	3	19	6	...	15	0	17	3	"	
79	Do. 9-way do.	...	...	...	...	...	...	13	6	19	6	22	6	...	...	...	...	...	"	
80	Do. 10-way do.	...	...	...	...	...	...	15	0	22	6	25	6	...	...	...	...	...	"	
81	Do. 2-way, spigot outlet	...	...	...	...	...	...	2	7	4	0	6	0	...	3	9	4	6	"	
82	Do. 3-way do.	...	...	...	...	...	...	3	9	6	4	7	6	...	5	3	6	0	"	
83	Do. 4-way do.	...	...	...	...	...	...	5	7	9	0	10	6	...	6	9	7	10	"	
84	Do. 6-way do.	...	...	...	...	...	...	8	7	13	0	15	0	...	8	3	9	6	"	
85	Tee Piece	...	...	...	...	...	...	2	3	4	3	4	9	...	3	6	3	9	"	
86	Do.	...	...	...	...	...	...	2	3	4	0	4	6	...	3	0	3	4	"	
87	Do.	...	...	...	...	...	...	2	3	4	0	4	6	...	3	0	3	4	"	
88	Do.	...	...	...	...	...	...	2	0	3	9	4	2	...	3	3	3	6	"	
89	Do.	...	...	...	...	...	...	2	0	3	9	4	2	...	3	3	3	6	"	
90	Do.	...	...	...	...	...	...	1	9	3	6	3	10	...	3	0	3	3	"	
91	Do. diminishing	...	...	...	...	...	...	3	2	4	2	4	3	3	2	4	2	4	3	inches.
92	Do. do.	...	...	...	...	...	...	3	9	4	0	4	3	2	9	3	3	3	6	each
93	Do. do.	...	...	...	...	...	...	3	9	4	0	4	3	2	9	3	3	3	6	"
94	Do. do.	...	...	...	...	...	...	3	9	4	0	4	3	2	9	3	3	3	6	"
95	Do. do.	...	...	...	...	...	...	3	5	4	2	4	6	2	6	3	0	3	3	"
96	Do. do.	...	...	...	...	...	...	3	5	4	2	4	6	2	6	3	0	3	3	"
97	Do. double, all sockets	...	...	...	...	...	...	4	6	8	3	9	0	...	5	3	6	0	"	
98	Cross Piece, all sockets	...	...	...	...	...	...	3	3	5	7	6	0	...	4	10	6	0	"	
99	Do. 3 sockets, 1 spigot	...	...	...	...	...	...	3	1	5	6	6	0	...	4	9	5	9	"	
100	Do. 2 sockets, 2 spigots	...	...	...	...	...	...	3	0	5	3	5	9	...	4	6	5	9	"	
101	Do. 1 socket, 3 spigots	...	...	...	...	...	...	3	0	5	3	5	9	...	4	9	5	9	"	
102	Do. all spigots	...	...	...	...	...	...	3	0	4	9	5	6	...	4	3	5	6	"	
103	Do. diminishing, 4 in. x 2 in.	...	...	...	...	...	...	4	2	5	7	6	9	...	...	...	...	...	"	
104	H Piece, 2 sockets, 2 spigots	...	...	...	...	...	...	4	0	5	9	6	3	...	5	3	5	8	"	
105	Do. all sockets	...	...	...	...	...	...	4	3	6	3	7	6	...	6	0	7	3	"	
106	Branch Pipe...	...	...	...	...	...	...	2	3	4	3	5	0	...	...	...	...	...	"	
107	Do.	...	...	...	...	...	...	2	6	4	9	5	6	...	...	...	...	...	"	
108	Do.	...	...	...	...	...	...	2	3	4	3	5	0	...	...	...	...	...	"	
109	Do.	...	...	...	...	...	...	3	9	6	0	6	9	...	...	...	...	...	"	
110	Y Branch Pipe	...	...	...	...	...	...	3	0	4	9	5	6	...	4	2	4	6	"	
111	Do.	...	...	...	...	...	...	3	3	5	3	6	0	...	4	3	4	10	"	
112	Branch Pipe	...	...	...	...	...	...	3	5	4	6	5	3	...	3	3	4	0	"	
113	Do.	...	...	...	...	...	...	3	9	4	9	5	6	...	3	9	4	6	"	
114	Do. diminishing outlet	...	...	...	...	...	...	3	2	4	2	4	3	3	2	4	2	4	3	inches.
115	Outlet Syphon, do.	...	...	...	...	...	...	3	3	3	9	4	3	3	1	3	5	3	8	each
116	Do. do.	...	...	...	...	...	...	3	6	4	6	4	10	3	4	3	6	3	10	"
117	Do.	...	...	...	...	...	...	4	2	6	9	7	6	...	...	...	...	...	"	
118	Do.	...	...	...	...	...	...	3	9	4	6	4	10	...	...	...	...	...	"	
119	Chair Syphon	...	...	...	...	...	...	3	3	5	7	7	6	...	4	6	5	6	"	
120	Do.	...	...	...	...	...	...	3	9	5	3	7	6	...	4	6	5	6	"	
121	Do. 3-way	...	...	...	...	...	...	4	6	6	0	9	4	...	...	...	...	...	"	
122	Dip Pipe	...	...	...	...	...	...	3	0	4	6	6	0	...	...	...	...	...	"	
123	Boiler Elbow, sideways	...	...	...	...	...	...	3	0	3	3	3	9	...	2	9	3	0	"	
124	Do. do. endway	...	...	...	...	...	...	3	0	3	3	3	9	...	2	9	3	0	"	
125	Do. Top, straight	...	...	...	...	...	...	2	9	3	3	3	5	...	2	7	2	9	"	
126	Do. Side Elbow, short	...	...	...	...	...	...	3	0	3	9	4	2	...	2	3	2	6	"	
127	Do. do. long	...	...	...	...	...	...	3	0	4	6	6	9	...	...	...	...	...	"	
128	Do. Elbow	...	...	...	...	...	...	3	0	3	9	4	2	...	...	...	...	...	"	
129	Do. Socket	...	...	...	...	...	...	1	2	1	9	2	3	...	...	...	...	...	"	
130	Do. do.	...	...	...	...	...	...	1	3	1	11	2	6	...	1	6	2	0	"	
131	Do. Flange and Socket Piece	...	...	...	...	...	...	1	6	2	6	3	0	...	2	3	2	6	"	
132	Do. Flange and Spigot Piece	...	...	...	...	...	...	1	6	2	3	3	0	...	...	...	...	...	"	
133	Curved Pipe, prices quoted specially	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	"	
134	Blank Socket	...	...	...	...	...	...	0	10	1	2	1	5	...	1	0	1	2	"	
135	Do. Spigot	...	...	...	...	...	...	0	8	0	9	1	0	...	...	...	...	...	"	
136	Sliding Collar, long...	...	...	...	...	...	...	0	11	1	5	1	8	...	1	5	1	8	"	
137	Do. ordinary	...	...	...	...	...	...	0	10	1	3	1	6	...	1	3	1	6	"	



PRICE LIST OF HOT WATER CONNECTIONS—*Continued.*

NO.											LONG SOCKETS.			SHORT SOCKETS.			
	Size										2	3	4	2	3	4	inches.
											s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	
138	Double Socket	...	...	...	...	...	...	...	...	...	1 6	2 3	2 9		2 0	2 6	each
											3×2	4×2	4×3	3×2	4×2	4×3	inches.
139	Diminishing Socket	...	...	...	...	...	...	...	...	...	2 0	2 3	2 9	1 9	1 9	2 3	each
140	Do. Pipe	...	...	...	...	...	...	...	...	...	1 8	1 11	2 3	1 8	1 9	1 11	"
141	Do. do.	...	...	...	...	...	...	...	...	...	1 8	1 11	2 3	1 8	1 9	1 11	"
142	Do. Nipple	...	...	...	...	...	...	...	...	...	1 3	1 5	1 6				"
143	Pipe Supporter	...	...	...	...	...	...	...	...	...	0 5	0 7	0 8				"
144	Do.	...	...	...	...	...	...	...	...	...	0 4	0 5	0 7				"
145	Do.	...	...	...	...	...	...	...	...	...	0 4	0 8	1 0				"
146	Do.	...	...	...	...	...	...	...	...	...	0 8	0 8	0 8				"
147	Do.	...	...	...	...	...	...	...	...	...	0 5	0 8	1 2				"
148	Do.	...	...	...	...	...	...	...	...	...	1 0	1 3	1 6				"
149	Do.	...	...	...	...	...	...	...	...	...	1 0	1 3	1 6				"
150	Do.	...	...	...	...	...	...	...	...	...	1 0	1 3	1 8				"
151	Do.	...	...	...	...	...	...	...	...	...	1 2	1 5	1 11				"
152	Do.	...	...	...	...	...	...	...	...	...	1 4	1 8	2 1				"
153	Three-way Syphon Box End, projecting sockets	...	...	...	...	...	...	...	...	...	4 6	5 3	6 9				"

Carriage Paid to any Railway Station on Orders of £3 and upwards.

TERMS: NET CASH.

PIPES & FITTINGS LAID DOWN TO PLAN ARE CHARGED EXTRA.

Hot Water Coils, Coil Cases, Radiators, Cast Iron Gratings, Conservatory Pumps, and Wrought and Cast Iron Boilers of every description delivered Carriage Paid.

# GALVANIZED OPEN CISTERNS

With angle-iron rim and corner plates.



Galvanized after made. Tested and guaranteed sound.

Loose covers and partitions fitted if required—extra.

Cisterns made to any size, shape and strength.

**DELIVERED CARRIAGE PAID.**

**TERMS: NET CASH.**

Capacity.	Outside Dimensions.			No. 16 Gauge.	No. 14 Gauge.	1/2th Plate (No. 10 Gauge.)
	Length	Width	Depth			
Gals.	ft. in.	ft. in.	ft. in.	£ s. d.	£ s. d.	£ s. d.
20	1 9	1 3	1 6	0 15 6	0 19 0	1 6 0
25	2 0	1 4	1 6	0 18 0	1 2 6	1 11 0
30	2 0	1 6	1 7	1 1 0	1 6 0	1 16 0
40	2 4	1 7	1 9	1 4 0	1 9 6	2 1 0
50	2 6	1 7	2 0	1 8 0	1 14 0	2 7 6
60	2 8	1 10	2 0	1 12 0	1 19 0	2 14 0
70	2 8	2 0	2 2	1 16 0	2 4 0	3 1 0
80	3 0	2 0	2 2	2 0 0	2 8 0	3 6 6
100	4 0	2 0	2 0	2 4 0	2 15 0	3 16 0
100	3 0	2 2	2 6	2 4 0	2 15 0	3 16 0
125	3 4	2 7	2 4	2 10 0	3 3 6	4 8 0
150	3 6	2 6	2 9	2 18 0	3 12 0	5 0 0
175	3 9	2 8	2 10	...	4 1 0	5 12 0
200	4 0	2 8	3 0	...	4 8 0	6 2 0
250	4 1	3 3	3 0	...	4 19 6	6 18 0
300	4 7	3 6	3 0	...	...	7 17 0
350	5 0	3 9	3 0	...	...	8 16 0
400	5 0	4 0	3 3	...	...	9 15 0
500	5 6	4 5	3 4	...	...	11 1 0

The Gauge named above is the thickness of the plate before being Galvanized.

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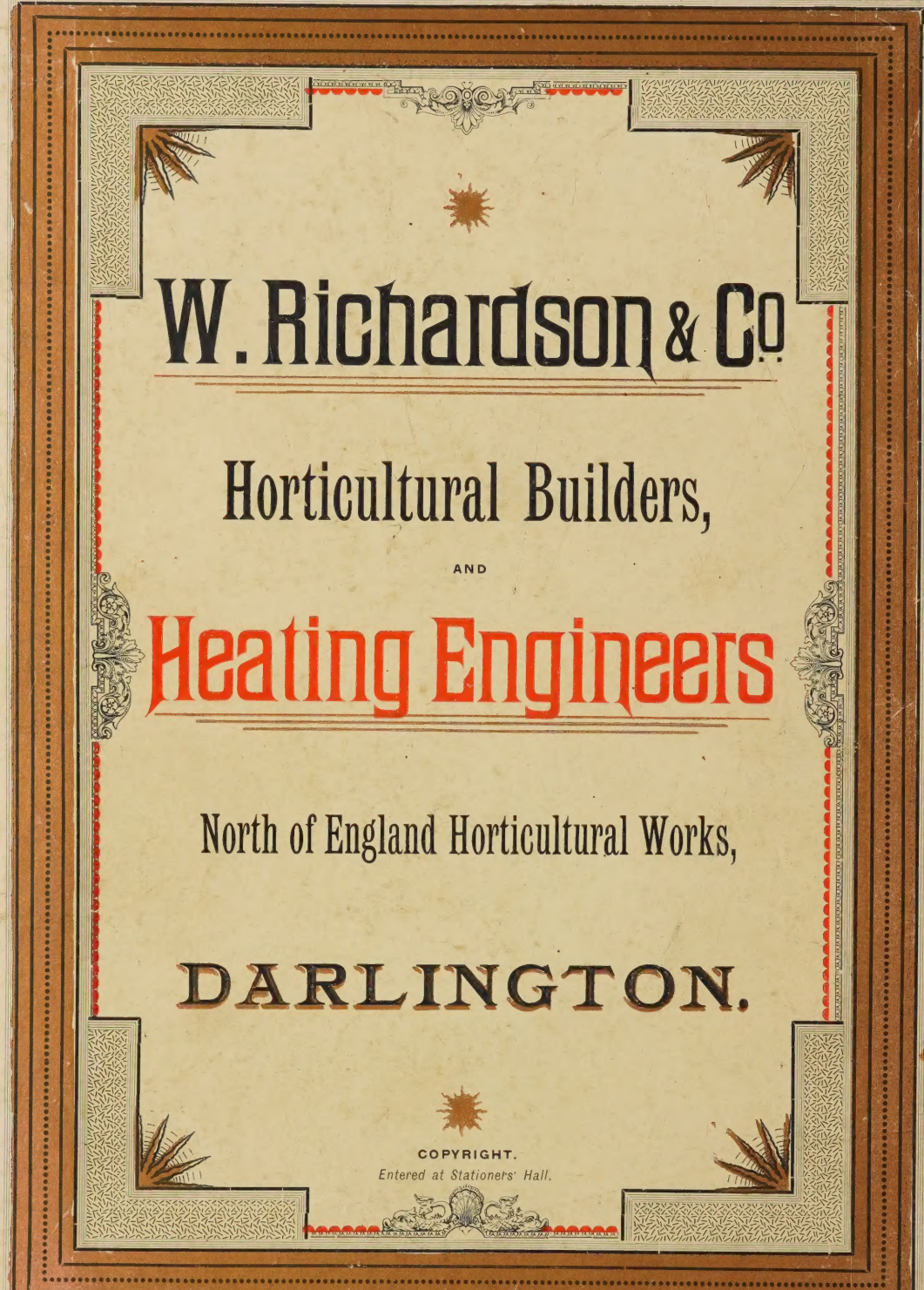












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
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AND

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